PHILADELPHIA, JANUARY 12, 1884.

## ORIGINAL LECTURES.

### CLINICAL LECTURE ON URETHRAL STRICTURE.

BY FESSENDEN N. OTIS, M.D.,
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GENTLEMEN,—You will remember that two weeks ago to-day an operation was performed on two individuals at this clinic, for the relief of urethral stricture. In one of those cases there had been recurring cystitis for a long period, and apparently without provocation, coming on without the patient being conscious of having indulged in any excess, of having taken cold, or anything that could be discovered as an imprudence. It was suspected that there might be some cause within the bladder, and the patient was repeatedly examined, but without result. He was suspected of having stricture, but there was a difference of opinion on that point. Several surgeons believed there was no stricture, while at least one, after examination, claimed that there was more or less stricture, causing the repeated attacks of cystitis, and advised the patient to come here and have the matter settled and attended to if possible. He came on from Michigan the week before last, and was then presented to you with his history.

The circumference of the penis in this case was about three inches and five-eighths. Examination was made before you, and, with the aid of the urethrometer and bulbous sound, two strictures were demonstrated, one contracting the canal at between two and a half and three inches fully eight millimetres, and the other, at the anterior portion of the canal, of ten millimetres, commencing at the orifice and extending about a half-inch. Division of the anterior stricture was made with a straight blunt bistoury, and the deeper one with the dilating urethrotome, both up to thirty-six mm., and a No. 36 sound was passed into the bladder. The results of the operation have been in every way favorable in this case. There has been no hemorrhage, and no complication of any kind. An instrument has been introduced every two or three days since that time, and certain beneficial results are already recognizable. Dr. Blake White, one of our clinical assistants, has had charge of the after-treatment. I have not seen the case since the day it was operated upon until this morning, and I have not had opportunity of making inquiries as to what changes have been effected. I would say, however, that in cases of recurring cystitis from stricture, and particularly from strictures of large calibre, the relief is sometimes immediate. But, again, it may be quite slow. Certainly, if this be the cause of the cystitis,—and it has been proved that cystitis may result from stricture,—relief follows the removal of the stricture, sooner or later. A case in point is that of a gentleman under my care several years since, who suffered from gleet. He was about sixty years of age, and came to me repeatedly with his gleet. I referred his trouble finally to stricture, which was found of large calibre, at three and a half inches from the orifice. The normal size of the canal was 34 or 35, and at this point there was a contraction of about three or four millimetres. I regarded this as the probable cause of his trouble, but he declined any operative measures. He was under my care a long while for recurring gleet, and at last he began to have some signs of irritation at the neck of the bladder. I then again stated to him that I thought it very important that he should have this stricture relieved, as I believed it was the cause of the gleet and of the irritation at the neck of the bladder. He declined the proposed operative measures with some warmth, and desired to be treated for his trouble in the ordinary way. He did not desire to have his urethra cut. He thought that ordinary means should be sufficient. Within a few days he came back, however, with an increase of the irritation, which finally resulted in a cystitis. He was put to bed, and, in spite of everything that could be done for him, he lay for at least a couple of months, being several times in great danger of losing his life from the acuteness of the cystitis, which extended evidently up the ureters and affected the kidneys to a greater or less extent. There was at one time some evidence of uræmic trouble. It seemed, however, that it was sympathetic, and not the consequence of pyelitis, as the subsequent history proved.

The patient, under the usual remedies

for acute cystitis, began to improve, and, from passing water every few minutes, he gradually passed it less and less frequently until he had an interval of from three to four hours, finally making a recovery. After having been apparently well for several weeks, he returned with an increased frequency of urination. Again stating to him that the probabilities were that this stricture was the cause of the return of his trouble, he became very anxious to know whether that stricture was really the cause of the suffering from which he came so near losing his life. When I replied in the affirmative, he became very indignant to think that he had not been forced to have the operation done. He said, "Doctor, you should have taken me by the throat, and held me down, and operated upon me!" All very well. But suppose I had done so, and the operation had not turned out so well? We are not accustomed to treat our patients in that way. We have to rely upon their consent; we have to reason with them, and if they are not capable of appreciating our reasoning they have to take the consequences. He said, "I want the operation immediately." I replied, "No. Here you are in the face of another cystitis, and I do not feel justified in operating upon you without a consultation with some authority, so that somebody shall help to bear the responsibility in case this cystitis should go on in spite of the operation and your trouble become worse than it was before. It then might be attributed to the operation." In this case I called in Dr. Markoe, and after a careful consideration of the difficulties of the case, although there was evident advancing cystitis, it was concluded to add a traumatism to this condition; that is, to make an incision into the urethra, which, under the circumstances, might have been considered by some surgeons well calculated to aggravate the trouble. The operation was done on the same day that the consultation was held, and, from passing his water every hour or two, immediately following the operation the intervals were increased to four or more hours. The patient had, practically, no further trouble, and within a week was about again, and from that day to this, now more than five years, he has had no more cystitis; not even any re-contraction of the stricture, as proved by a recent re-examination.

Now, that was a case in which there was immediate, positive beneficial result, and I have seen not only one such case, but several. It was for reasons deduced from cases like this that, when this patient came to us with recurring cystitis, it immediately occurred to me to examine the urethra to see if the same cause had not been the origin of the same trouble. The operation was done, and the immediate result the patient will now tell us. He says that he does not think that he had to urinate so often immediately after the operation. Since then, a day or two will pass with scarcely any irritation, and he will not have to pass water for three or four hours. On other days he has to pass water more frequently, but at no time so frequently as previous to the operation.

It would seem, therefore, that there has been some immediate beneficial effect produced. Sufficient time has not passed to enable us to pronounce upon the results so far as the cure of the cystitis is concerned. We will now show you the condition of the urethra after the operation of division.' At the original examination the circumference of the penis was found to be three and five-eighths inches, which would—accepting the proportionate relation between the circumference of the penis and that of the urethra, which I have often referred to—call for an instrument of 35 or 36; and, although we were able before to pass a No. 36, I should be perfectly satisfied to pass a No. 35 to-day, as some slight swelling of mucous membrane usually remains for some weeks after the operation of dilating urethrotomy. This instrument, you will observe, passes without any effort on my part to force it down. Now, what we set about in this case was to remove the stricture. That was the immediate object of the operation. Consequently, by so far we have done exactly what we intended to do. We have relieved the stricture, as demonstrated by the passage of the instrument, thirty-five millimetres in circumference, two weeks afterwards, and without any signs of sensitiveness on the part of the patient. The removal of the strictures has been accomplished without any accident occurring since the operation. There has been no hemorrhage. Hemorrhage is one of the accidents that we look for as quite likely to follow the operation immediately.

I had not time last week to say anything

to you about the subject of hemorrhage. It is important for you to understand that, in these cases, we cut into vascular structures deliberately, and with the purpose of dividing them, and we thereby put them in a condition to bleed, and consequently we should always be prepared to arrest any resulting hemorrhage. It is a very curious fact, which will be observed by those of you who shall have much to do with these operations, that in a very considerable proportion of them there is no bleeding that can be called a hemorrhage at all; that but a few drops of blood, perhaps a few drachms, may be lost at the time of the operation, and then scarcely more than a few drops at each introduction of the sound, until entire healing takes place. Now, this is so common a fact, that in a report of nineteen cases by Dr. Tilden and Dr. Watson, surgeons to the Boston Dispensary, and published lately in the *Boston Medical and Surgical Journal*, there was not a single instance of hemorrhage. I was exceedingly sorry—as I wrote Dr. Watson, in congratulating him on the completeness of the report and the success attending the operations—that no such accident had occurred, because one not familiar with the possibilities under such circumstances might infer from a series of nineteen cases without hemorrhage that hemorrhage was not likely to occur, whereas the probabilities would be that in the first case which came to the novice he would have a profuse hemorrhage. That is the usual luck of doctors who are beginning, as a rule. They often get into trouble that men who are familiar with the operation have not seen, perhaps, for a very long time.

It has occurred to me repeatedly to be called in consultation for this trouble in just such cases. Why hemorrhage does not take place more frequently after division of urethral stricture, or, rather, why it does not always occur, is difficult to say; but there are certain cases which bleed from the time of the operation persistently for days, unless some means are taken to prevent it. Only recently I received a hurried dispatch from a surgeon in the country, who had operated upon between three and four hundred cases and had never had any trouble of account from hemorrhage,—never any that he was not able immediately to control. He wrote me that he had an important patient in whose case he had cut in the anterior urethra, and he had bled constantly for ten days; and he wanted to know what he could do for him. The bleeding was becoming quite a serious matter, besides being a trouble and an annoyance to the man, who had reason to suppose, when he submitted to operation, that he would be able to be about his business in a few days. The doctor said that if the bleeding were anywhere where he could cut down and tie the vessels, he would not care; but here he could do nothing of the kind. He had tried all the ordinary measures, and the hemorrhage would not stop. Finally, however, the hemorrhage was controlled, and the patient made a satisfactory recovery.

We should, then, in the first place, appreciate the fact that a little gush of blood may occur at the time of the operation, which may be controlled by a towel wrapped around the penis, and there may not be any more until the patient attempts to urinate, when, perhaps, there will be another gush.

Now, in the majority of the cases, no flow of blood that amounts to much occurs; but now and then a gush takes place which is considerable—say half an ounce—and requires some means to arrest it. Then, again, erection, especially occurring at night, may bring on hemorrhage. Now, these hemorrhages may occur where you only divide the meatus. I have seen a man bleed as much as a pint from a simple division of the urethral orifice; and that, too, in a very little while. These experiences teach us that every case, whether of division of the meatus or of the deeper urethra, should be treated as though it were a case in which hemorrhage would surely occur; and then we would never be taken unawares. I take every precaution in every case, even of division of the orifice, which we then make to correspond to the size of the urethra behind it. I insist upon it that the patient shall go home and go to bed and have some one to look out for him. I take the measures which I shall show you for stopping hemorrhage immediately following the operation, and then I instruct the attendant who remains with the patient to make pressure at the end of the penis the length of the cut, until any hemorrhage that may occur shall have ceased. Now, this may seem to you, and

I know it appears so to many surgeons, to be making too much of so simple an operation. But I will give you an account of a case which occurred within the past two months. A gentleman came to me who had long suffered from a gleet, apparently the result of contraction, within half an inch of the orifice. I proposed an operation. He was very anxious that his friends at home should know nothing about it. He was not willing to have the operation done at his home in Harlem, but desired to have it done at my office, and begged very hard to be permitted to take care of himself. He said, "Now, I am not a child, or a woman, and I am not afraid of blood. I am perfectly cool about matters which trouble many people, and I do not think, even if I should have hemorrhage, that I shall fail to take care of it myself. After all you have described to me, it seems very simple indeed. All that I have to do, if I have bleeding, is to take hold of the end of my penis and press it together until it ceases." I said, "Very well. It seems to me that you are a man who can take care of himself. I have had a good many patients who have undergone the operation, taken care of themselves, and done very well." In this case, as I usually do, I took a couple of pieces of pasteboard and placed them on either side of the penis, and encircled them with several india-rubber bands. He went home very confident. He came back on the following day, and said that he had been brought into a very low place. He went home, and got along very well; went to bed as usual. He lived in an apartment-house, and in the night he got up to urinate. He took off the wrappings from his penis, and after urinating he saw that instead of passing urine he was passing blood, and he said he had a very confused sensation, and the next he knew there were about a dozen people in the room, from all quarters of the house. They had sent for two or three doctors, and his wife thought he was dying. Instead of this, he had simply observed the blood, and had fainted away with his pantaloons down. The man had probably lost altogether about two tablespoonfuls of blood. The matter excited a scandal in the house which I do not suppose has been explained up to this time. Now, I merely relate this to show you how little a matter, when neglected, may put a very respectable family under a cloud. I never, under any circumstances, cut the orifice in my office without being thoroughly satisfied that the case is going to be well taken care of for three or four days, although no bleeding may occur at the time of the operation.

A very worthy merchant of this city had irritation at the neck of the bladder, for which I believed contraction at the orifice was responsible; and such turned out to be the case, as relief of the irritation occurred immediately after the operation. I explained to him how necessary it was that he take care regarding a possible hemorrhage. He was anxious and urgent to go down about his business, but I kept him for four days, introducing an instrument daily, and he had no hemorrhage, and he began to look at me in a very curious way and to question whether I was not making a little too much ado about the matter. He asked if I did not think that he could safely go down to his business the next day. I told him that I did not know but that he might; that he was doing very well, but that sometimes hemorrhage took place even after several days. I told him that before going to his business he might come to my office, and I would pass an instrument through the orifice. Up to that time there had not been lost half a dozen drops of blood since the operation. I passed the instrument very carefully down as he stood in my office, and, as it was withdrawn, out came a gush of blood. He bled perhaps a tablespoonful. Turning very white, he said, "Doctor, I beg your pardon. I thought you were making too much fuss about this; but I will now go home." And he went home, and stayed there for several days without urging.

Now, it may seem very unnecessary to take up so much time about so small an operation as division of the meatus, but I have had experiences which make me respect even division of the meatus, and I always insist that the patient have somebody with him during the night following the operation,—one who shall look after him, to see that he does not bleed during a temporary erection in sleep. I have never forgotten, when speaking of the possibilities of hemorrhage occurring under these circumstances, a case which I have before alluded to, in which there was a loss of a pint of blood within an hour. Dr. Markoe was once called to a case of

hemorrhage from the urethral orifice, just exactly how occurring I do not remember, in which the patient died from hemorrhage by the time he arrived. Now, such an accident is not at all likely to occur; but I tell you the worst in order that you shall be induced to take all precautions, for we often hear surgeons speaking of the operation as a trifling one, stating that immediately afterwards they simply send the patient home. I believe that, as a rule, such patients will do well; but, by reason of the exceptions, you should always be prepared for the hemorrhage which may possibly occur.

In cases of division of the orifice alone, we take a couple of pieces of pasteboard, about two inches wide, and apply them on each side of the penis, then either retain them by means of rubber bands or by means of a bandage with the end divided into four or six tails. After making three or four turns, tie, making as much pressure as may be required. Secure the tails by tying. After applying such an apparatus as this, the patient may go home, and, if it is uncomfortable, he may take it off. This is the measure adopted where hemorrhage continues to occur during urination and erection.

When the hemorrhage is deep down anywhere in the pendulous portion of the urethra, it is usually sufficient to put an ordinary bandage around the penis. This, as a rule, prevents hemorrhage; but it is always well in such cases to make a little pad and put it in the perineum, and have a stick, the end in the form of a crutch, to pass from the foot of the bed up to the perineum, that, if necessary, the patient may make pressure against the pad in the perineum, occluding the urethra at that point, and thus preventing the blood going back into the bladder. Urine drawn directly from the bladder with the catheter, and containing blood, shows that blood has gone back into the bladder; or this may be inferred if vesical tenesmus occurs. This accident is not likely to occur where the division has not been made farther back than four inches from the orifice, but it is not infrequent when the cut is at or beyond four inches. Therefore, it is desirable to have an apparatus which can always be easily extemporized, which will secure the patient against hemorrhage into the bladder. All that you will then have to do is to make pressure at some point anterior to the cut. You can thus certainly control hemorrhage. My custom has been, when bleeding of considerable moment has occurred, to take an ordinary gum-elastic tube, or some other tube with an open end and which is well rounded at the end, so that it will not injure the urethra, pass it down beyond the cut, and retain it by means of a bandage. By this means pressure can be made so that it will be impossible for further hemorrhage to take place. The ordinary endoscopic tube answers a very good purpose, and I have used it on several occasions. I have here also some rubber tubes made for this purpose, consisting of a firm, soft, smooth rubber, which can be passed down the urethra and a bandage be applied. If the endoscopic tube is used, the obturator is removed when the patient desires to urinate. I have rarely had further trouble after using one of these tubes. If the presence of the instrument causes discomfort, it can be removed; but, as a rule, the patient will bear it long enough to arrest the hemorrhage. Should this tube not prove effectual in any given case, I introduce an ordinary catheter down below the cut, making pressure in the perineum, and then gently, with the Davidson syringe, introduce water of a temperature of 120° F., under which the mucous membrane distinctly pales, and thus immediately arrest hemorrhage. I should not hesitate to carry the temperature up to 125° F. I have a patient who has been under my care for the past two weeks, who has gradually carried the temperature of the injections for gonorrhœal trouble up to 130° F. with perfect immunity. But I should begin with a temperature of 118° to 120°, and I should feel satisfied that this plan would arrest any case of hemorrhage that is likely to occur. Such are the measures which will relieve you of the embarrassment of having hemorrhage which you cannot otherwise arrest.

In the case of this patient, I shall keep track of him, examine his urine, and treat the cystitis just the same as if no operation had been done; for it is not necessary to give up the ordinary measures of treatment because of having divided the stricture; and I shall let you know the further progress of the case.

The other patient before us is one upon whom we operated at the same time for

persistent gleet. The gleet had continued for some time, in spite of much and varied treatment. The man had become discouraged, and he came on here from a Western city by advice of his physician to see what could be done to relieve him. I was very much interested, in reading the report of the nineteen cases reported by Drs. Tilden and Watson, of Boston, already alluded to, in the large number of cases of gleet in the list, some of several years' duration, which were cured within a month or two after the operation. We all, who see much of gleet, know that it goes on with the ordinary methods of treatment for many months, and even years in certain cases. As a rule, division of stricture results in the speedy cure of gleet. If, then, by division of stricture the cause of the gleet can be removed, such a mode of cure has the great advantage of promising permanent cure instead of temporary relief.

In the case of the second patient whose strictures were divided, an instrument No. 35, you will observe, passes very easily, and the purulent discharge has practically disappeared. Within a fortnight from the date of operation it has dwindled down to a slight amount of transparent mucus. The result, therefore, has been a very satisfactory one.

These two patients, when erections have occurred, have had slight chordee. This, following the operation, is very common, and it leads me to say that in all cases before doing the operation you should, in the first place, as far as possible reduce the inflammation that may be present. Reduce the discharge to a minimum, and, when you find that you cannot bring it down any lower, then it is time to operate. I have in several cases had to operate during an acute and profuse discharge, but the inflammation had lasted for five months acutely in one case, and the reason for the long duration of the inflammatory stage was that the urethra was full of constrictions. These strictures had to be divided before the discharge could be relieved. After the operation the patient made a very good recovery, but with marked incurvation on erection, causing temporary pain. This lasted in some degree for about a month, and then finally subsided. The greater the amount of irritation and discharge, or engorgement, or inflammation from any other cause, sexual or otherwise, the more likely will the patient be to have chordee following the operation. I have never had a case in which it did not pass off after a time. This is one of the possible complications to be borne in mind. But these operations are not done for pleasure. They are done for an important object, and, when considering their disadvantage, or the annoyance which they cause, we must bear in mind the advantages which are expected to be gained. Patients sometimes forget the reasons which led them to submit to operations, and become impatient when cure does not follow promptly and painlessly. They should be told of possible accidents beforehand, when you are reasoning with them concerning the ultimate discomforts and dangers of their gleet, or vesical irritation, and its mode of cure. Have your patients coincide with you in the course of treatment which you propose to pursue. If the patient declines the operation, five or ten years after he may be obliged to have it done when the conditions are not quite so favorable. These patients are ever in danger of attacks of gleet, of prostatic irritation, of reflex neuralgias of the testicle and the pelvic region, of cystitis, or epididymitis. Their lives are more or less imperilled also by their influence on kidneys predisposed to, or the subject of, disease.

Any one of these complications would alone warrant a careful search for urethral stricture, even where none had been previously suspected. It should not be forgotten that such difficulties and diseases, distinctly resulting in many cases from stricture of the urethra of large calibre, are often treated for long periods by medicines the tendency of which is to impair digestion and debilitate the nervous system, or by various local applications or injections, or bougies and sounds, into the urethra,—often into the bladder,—which may, and not unfrequently does, result in grave injury to the patient when the strictures have diminished in calibre, and have caused damage to the associated organs.

The sooner, then, that a stricture has been recognized as a source of trouble and judiciously and effectually removed, the greater will be the promise of prompt and permanent relief from the difficulties which it occasions and the perils which it threatens. In such cases, the judicious and

skilful performance of dilating urethrotomy, under favorable conditions, in my judgment, affords the necessary relief with the least discomfort, the least risk, and the least loss of time.

## ORIGINAL COMMUNICATIONS.

### REPORT ON THE PROGRESS OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,

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THE advance made in electro-therapeutics for some two years past has not been, apparently, either rapid or extensive; nevertheless, much has been done without its appearing in our journals. This neglect is the more reprehensible because the entire subject of the practical employment of electricity and magnetism in medicine and surgery is ignored by nine-tenths of the general practitioners, and it is but imperfectly understood by the majority of those who do attempt to use this invaluable agent. As a consequence of the little to be learned outside of special works on the subject, too many physicians who do not own such books have relied on faradic currents exclusively in all cases, partly because the mechanism involved is more readily handled and cheaper to purchase, and also because the original plant required in using galvanism is not only more expensive at first, but is also more costly and difficult to maintain. In addition, the proper methods of applying it are unknown, or, what is worse, it is used hap-hazard. It is very important that in all reported cases the *precise* method of application should be accurately described.

In considering the subject of galvanism, the batteries for producing constant currents have been much improved lately. The cumbersome, dirty, and troublesome elements which for a long time were employed have been superseded by cells of a simpler type, and the first cost of these is not alone less, but their maintenance is also cheaper. The Hill gravity, the Léclanche prism, and the Law elements are each economical and readily manageable by any one; and, as they are largely used by telegraph- and telephone-companies, such parts as may be required for repairs are readily obtainable at low rates through dealers in all large cities.

In the treatment of migraine, or sick headache, galvanism has lately been more generally employed than heretofore, and in most instances the use of purgatives is by this method rendered unnecessary. In the practice of the writer, galvanism has taken the place of the bromides, chloral, caffeine, and allied drugs in the majority of instances, particularly in obstinate or long-standing cases. The persistent insomnia accompanying typhoid and other low febrile conditions has been admirably controlled by galvanism.* In exophthalmic goitre an increasing list of successful results has been noted, and attention has also been called to the fact that only constant currents possess the power of acting on the heart-muscle, not alone in the disease named, but at any time; and the idea entertained by many that induction-currents were capable of modifying cardiac movement is shown to be fallacious when the electrodes are applied to the thorax in the usual manner (over the sternum and between the scapulæ). The writer is not inclined to accept the statement that faradic currents cannot modify cardiac action, *however* applied, because experiment has satisfied him that tumultuous palpitation is frequently calmed if the faradic current is directed through the pneumogastric from the angle of the jaw to the solar plexus, or the lower electrode may be applied over the sternum, the probable explanation being that induction-currents as ordinarily applied are more liable to traverse the superficial fascia around the thorax, instead of passing directly through from one pole to the other, as constant currents will.

Seligmüller† has reported very favorably on the use of electricity in acute articular rheumatism. The preferable method is to fasten one pole to the affected joint by means of a wet bandage, the other being applied above the articulation on any convenient point. Long-continued mild currents are recommended; and, although it is not stated which variety is to be used, the general tone of his remarks points to faradism, although, as is well known, galvanism is far better adapted for the relief of pain in any affection for which electricity is indicated. Hydrar-

* Philadelphia Medical Times, vol. xi. No. 350.
† New York Medical Record, December 22, 1883.

throsis has been reported as notably benefited by prolonged applications of the constant current, after failure of ordinary methods of treatment, by several reliable authorities.

Attention has been called quite recently to the value of electricity in treating intermittent fever, all other remedies in these cases being avoided. The writer of this paper has given* a series of thirty cases thus treated successfully, and in a following article† has given an account of experiments made to determine the effect of electrical currents of differing character upon the so-called disease-germs. Although bacteria of all kinds are readily destroyed by electricity, however generated, it is not probable that the favorable results of treatment attained in paludal and like fevers is due to electricity as a germicide; but the benefit is more likely attributable to its action on the general nervous system, but particularly on the sympathetic. The reduction of enlarged spleen or malarial ague-cake is readily accomplished by electricity without the aid of quinine, iodine, mercury, or other sorbefacients.

In gynæcology and obstetrics, electricity has been increasingly used, and many obscure cases of reflex nervous disorder due to ovarian congestion and neuralgia, which had obstinately resisted other treatment, have been overcome by galvanism. In all such cases it is essential that, in addition to the tonic effect of general applications, the main attention must be paid to the uterus and ovaries, the current being confined to them by suitable electrodes.

The cuts illustrate the rheophores used in uterine applications by the writer. No. 1, Fig. 1, is intended to confine the current to the uterus alone, as it enters by the straight rod, which is insulated to the tip, at which point the current leaves, and, traversing the body of the uterus, it enters the perforated ball, and by way of the insulated curved rod returns to the battery. The straight rod is movable lengthwise, to reach the fundus in long or short canals, and is also flexible, to pass flexions. The large perforated uninsulated ball is placed against the os externum after the intra-uterine rod is entered sufficiently, and the current is then established.

* Medical Bulletin for November, 1883.
† Ibid. for December, 1883.

No. 2 is the ordinary sound insulated all except the intra-uterine two and a half inches.

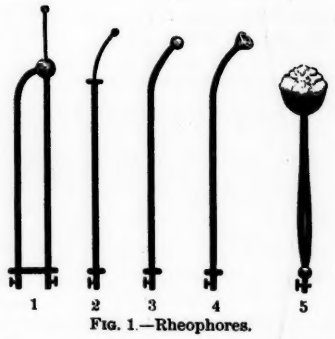



Fig. 1.—Rheophores.

No. 3 is a ball rheophore for the cervix or the ovaries, used per vaginam.

No. 4 is a cup-shaped rheophore for the cervix.

No. 5 is the ordinary sponge-handle for external use.

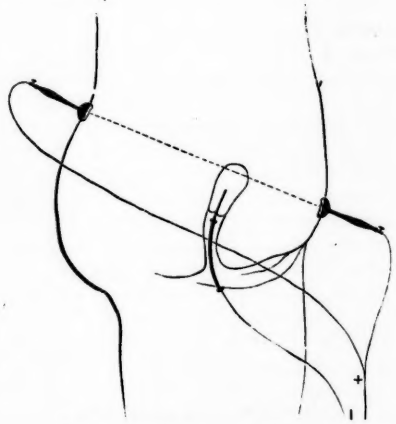



Fig. 2.—Direct Uterine Electrization.

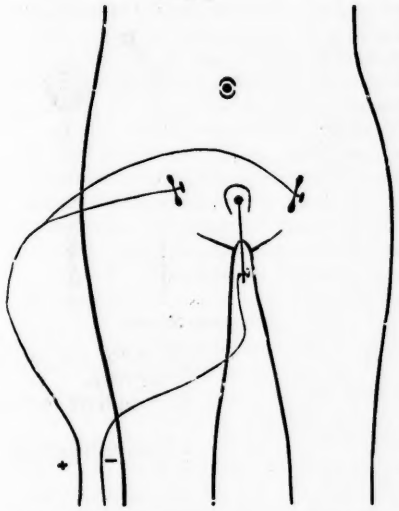
Fig. 2 shows direct uterine electrization by an intra-uterine sound (No. 2, Fig. 1), the other pole being divided and applied over the pubes and genito-spinal centre.

Fig. 3 shows conjoined utero-ovarian electrization, the negative in the uterus and the positive divided and applied over each ovary. In all cases where electrical treatment is applicable, *localization* is followed by good results, which cannot be obtained by treatment applied aimlessly over the abdomen and back, as ordinarily seen.

Several cases are noted where post-

partum hemorrhage has been checked by faradization of the womb, after other

FIG. 3.



methods, including ergot, ice, vinegar, and hot water, had failed.

Abdominal dropsy has been considerably relieved, as reported by several observers, by general faradization. In one of the writer's cases this plan achieved the cure after ordinary treatment by diuretics, purgatives, and sudorifics failed. The patient was the son of a physician, and was convalescing from a severe attack of scarlatina, when nephritis supervened from a cold, and the albuminuria exceeded anything in his experience short of a fatal termination. In dropsy from hepatic disorder good results do not appear under electricity, as a rule, although torpid liver is readily stirred into action by induction currents.

The induction-balance has been rendered more perfect since its useless attempt in the case of President Garfield, and may in the future be of service. The various accumulators or secondary batteries are not as yet of any value, except for very short and expensive applications of the cautery or incandescent light.

The revival of static electricity from its long slumber, some two years ago,* has developed its value in amenorrhœa, spamenorrhœa, and many cases of dysmenorrhœa; and the facility with which this form of current is now producible by the improved Toepler-Holtz machines enhances very materially its importance to the neurologist as well as to the gynæcologist.

As a galactagogue, static electricity has proved serviceable† in several reported instances; and in the chest-pains of phthisis‡ it has not only relieved the suffering, but its effect on the general nutrition has been good. The distressing night-sweats in pulmonary disease have been modified in some instances, and in others abolished for a considerable length of time, by this form of electricity.

In constipation from torpor of the intestinal muscles, static electricity has proved of service, and in jaundice from congestion of the liver and obstruction of the biliary ducts strong shocks from Leyden jars have overcome the condition.

In surgery the galvano-cautery divides honors with Paquelin's thermo-cautery; but with a competent operator there can be no doubt whatever as to the greater utility of the electric wire, there being less radiated heat to possibly do damage to adjacent parts, to say nothing of the danger always attending the use of benzine or its compounds in unskilful hands in connection with flame. Accidents have happened repeatedly with the gasoline cautery which would with the galvanic cautery or electric écraseur have been impossible. Seiler§ advocates the galvano-cautery knife (of his own construction) for intra-nasal hypertrophies, and also finds the heated loop admirable for the removal of pediculated tumors of the naso-pharynx and larynx. In this he is supported by other recognized authorities.

Urethral stricture has been lately treated with very great success by galvanism in the hands of several surgeons.‖ It has been long known that insulated bougies would pass narrowed points under both faradic and galvanic currents, without undue force, which could not be traversed by ordinary instruments of the same or frequently considerably smaller calibre. Under electrolysis, urethral stenosis is in suitable cases overcome with little difficulty, without forcible rupture, and the tendency to fe-

* Blackwood, Medical and Surgical Reporter, March 12, 1881; Morton, New York Medical Record, April (four numbers), 1881.

† Philadelphia Medical Times, vol. xii. p. 103; New York Medical Journal, vol. xxxvii. p. 138.

‡ Bartholow, ibid., April 14, 1881.

§ Diseases of the Throat and Nasal Cavities, Second Edition, H. C. Lea & Co., Philadelphia.

‖ Dukeman, New York Medical Record, January 5, 1884.

brile disturbance is less than with the more commonly employed methods.

Obstinate gleet has succumbed to electricity in instances where the discharge was probably due to contraction of the deeper urethra.*

In hysterical manifestations the application of powerful magnets to anæsthetic regions of the body has, it is stated, induced a return of sensibility to such parts, at the expense, however, of other localities, which in turn become insensitive, this phenomenon being grandiloquently termed "consecutive oscillations," a wobbling about of imaginary symptoms which radical measures—as, for example, the actual cautery (either galvanic or a simple hot poker)—would have undoubtedly relieved instanter and permanently.

A legitimate use of the magnet has been frequently made in ophthalmic surgery in the extraction of metallic foreign bodies which have penetrated the eyeball. Particles of iron and steel have in many instances been removed by means of specially-devised instruments, consisting of a permanent or electro-magnet attached to a slender rod or probe, which is usually introduced through the original wound of entrance. In all cases the *electro-magnet* is preferable, because the point of the extractor can be in this form placed against or near the body to be removed, before any attractive force is developed, and the actuating current can then with advantage be produced. In deeply-seated fragments of iron the attractive force of a permanent magnet of ordinary power, on the contrary, would be exerted at once on its reaching the cornea or conjunctiva before the better line of extraction could be secured; and instances have happened where the spicula has jumped promptly to a permanent magnet in a direct line before the operator intended it to act, and a second wound of the organ has unintentionally and unfortunately thus happened.

Electric lighting, both for out-door and in-door purposes, has received a great impetus within the past two years. It is too early to say authoritatively what bad effect, if any, this method of artificial illumination has had or will have upon the general health, and especially the vision, of persons using it. A material difference exists between the two methods of arc and incandescent lamps, the former being principally used for out-door purposes or the lighting of large halls or rooms by a few powerful lights, and the latter for those instances requiring a standard of fifteen to twenty candle-power at each point, much the same as with gas or petroleum. The unsteadiness and blue tinge of the arc light is a disadvantage which must interfere with its general adoption, except for the purposes alluded to; but the soft, white, and perfectly steady light of the incandescent systems admirably fits them for all household use. The absence of the heat arising from gas, the fact that oxygen is not consumed by the light, the non-production of carbonic oxide or acid fumes, the safety from fire or explosion, and the absolute steadiness of a good incandescent electric lamp, such as the Swan, the Lane-Fox, the Maxim, or the Edison, must before long not only force their introduction into factories, large stores, public buildings, or other places where an isolated plant is economical (and in any case electric lighting on this system is more economical than gas, light for light), but, as in parts of New York City, large districts will ultimately be supplied from central stations as a matter not alone of economy but of convenience.

Several exceedingly ingenious arrangements for using the incandescent light in aural, laryngological, and ophthalmic medicine and surgery have been recently made. Minute lamps have been affixed to the laryngeal or rhinoscopic mirror for the illumination of the pharynx and adjacent regions; but the substitution of the incandescent light, applied either to the Toboldt stand or directly to the head-reflector, affords at once a brilliant light and one which shows the parts under inspection in their normal colors,—a matter of moment to inexperienced observers, who are not so ready to make allowance for this point as their elder *confrères*.†

Many other points in the application of electricity to medicine and surgery might be adverted to, but time and space forbid. It is not only the direct employment of electric currents of any or all forms to diagnosis or therapeutics that interests the practitioner, but the wonderful facility of

* Medical and Surgical Electricity, Beard and Rockwell, First Edition, p. 660; New York, Wm. Wood & Co., 1871. Blackwood, Philadelphia Medical Times, November 4, 1882, vol. xiii. No. 390.

† Baker, British Medical Journal, November 10, 1883.

intercommunication which enables the interne at a hospital to summon his chief, or the private patient to call his medical adviser to the bedside, without reference to distance, time, or weather, through the telephone exchange; and the untiring vigilance and unfailing accuracy with which electricity serves us in numerous affairs of business as a silent watchman, a faithful recorder, and an assistant not to be tampered with or bribed, render it simply a matter of time when its services will be required and secured in the production of absolutely truthful sphygmographic, respiration, and temperature charts in all complete hospitals.

Electricity is not the mysterious agent now that it was considered a few years ago, but there is still plenty to learn concerning it and its uses; and not the least important line of research is that which invokes its aid in the alleviation and cure of disease. As was said at the outset of this paper, careful reports should be made by those who employ it largely in practice, for the benefit and guidance of those not as yet proficient in its use, in all cases precision being observed as to the current used, method of application, and definite measurement.

246 North Twentieth Street.

## EXPERIMENTAL USE OF CANTHARIDES AS A DIURETIC.

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine, University of Pennsylvania.

MARY G., æt. 18, a native of Philadelphia, was admitted into the University Hospital May 20, 1883. She had never been unusually exposed to bad weather, had never had venereal disease, nor had she used alcoholic liquors. Her family history was free from hereditary diseases. She had had the specific fevers of childhood, except scarlet fever. She had since been well and strong up to three years before above date. At that time she had an attack of pneumonia, from which she completely recovered, but soon after commenced to have painful micturition. Fourteen months prior to admission to the hospital the usual train of symptoms of chronic parenchymatous nephritis developed, with general anasarca. She passed the year with fluctuating fortunes, now better, again worse, always with much headache. When admitted to the hospital, her face was pale, waxy, and puffy. There was marked ascites, some double pleural effusion, and general anasarca. She complained of constant frontal headache, at times drowsiness; pupils were small; nausea and vomiting constant: in a word, a uræmic attack seemed impending. There was hypertrophy of the left ventricle, with accentuation of the aortic second sound. The urine measured eighteen ounces in twenty-four hours, was albuminous, and microscopic examination revealed an abundant deposit of tube-casts, mostly granular, but some containing a few epithelial cells.

*Treatment.*—For a month skim-milk diet and other remedies were employed, without much benefit. The uræmic symptoms were constantly threatening. She was then given tinct. cantharides without other medicine, at first three drops t. d., then four times daily, and finally five times daily. The dose was also raised to six drops.

Within a week the urine commenced to increase, the uræmic symptoms to lessen, and the anasarca and dropsy became gradually reduced. When she left the hospital, in August, she was passing daily five pints of urine. The use of the drug was continued after the patient went to her home, but was finally discontinued about the middle of October. The diet during this period was, however, sedulously limited to milk-porridge or eggs. After October iron was employed.

The girl is now able to return to her occupation in a store, and is quite healthy in appearance. The urine is, however, still slightly albuminous, and contains some few casts.

The history of this case is, in its general features, representative of seven other cases, in each of which the diagnosis of chronic parenchymatous nephritis was made. In three of them the use of cantharides as a diuretic was negative; but in the other four signal diuretic action was produced.

In the dispensary of the Children's Hospital I have also used cantharides as a diuretic, combined with tinct. digitalis in cases of cardiac dropsy. The children's ages ranged from five to nine years.

In the wards of the Philadelphia Hospital I have also used cantharides in five cases of cardiac dropsy to fulfil the indications for the use of a diuretic. The use of the drug in these cases was never accompanied by deleterious effects, while it very constantly increased the urinary secretion, forming a valuable adjuvant with the digitalis. The maximum amount of the drug employed, in adults, in twenty-four hours was thirty drops, but usually not over eighteen drops were used. In the cases of the children smaller doses were employed.

The use of cantharides is mentioned by

William Roberts, of London, in his work on renal diseases, and by Dr. Wells, in seven cases. In Dr. Wells's cases, thirty to fifty or even sixty drops were administered per diem, with good effect in five cases. Ringer also reports well of it, but adds, "It is an uncertain remedy, which might be dangerous in inexperienced hands." Ringer, in the tenth edition of his Hand-Book, alludes to the high authorities who have recommended cantharides in certain forms of Bright's disease, and says that the "discrepancies respecting its effects arise, perhaps, from the differences in the dose administered by various observers."

He is convinced of its usefulness, even in acute Bright's disease, after the subsidence of the active inflammation and fever, say the fifth to the eighth day. He believes that in the state which follows the subsidence of the more acute stage "the urine continues small in quantity, contains albumen, and perhaps blood. If at this time, that is, just on the immediate subsidence of the acute inflammation, a one- to three-minim dose of tinct. cantharides is given every three hours, the blood will almost always quickly disappear, while the albumen decreases more gradually and the urine becomes more abundant. At a crisis like this it is true that a like amendment not unfrequently takes place without any treatment; but the influence of cantharides can often be put to a conclusive test. To a patient in the condition described above, passing urine containing albumen and much blood, give the drug in the way pointed out, and he will begin to improve. Now withhold the medicine, and both blood and albumen will return in the original quantity; and this effect can be repeated again and again." The majority of writers, however, upon therapeutics or upon renal diseases do not mention cantharides, or else, with Dickinson, are unfavorable to its use.

In the number of *Virchow's Archiv* issued November 5, an elaborate experimental study of the action of cantharides upon the kidney is reported by Dr. Eliaschoff:

The changes in the kidneys involve chiefly the glomerulus and the convoluted urinary tubules and the ascending branch of Henle's loop. At first there are the characteristic appearances of glomerular nephritis, whilst the urinary secretion is diminished or almost suspended, is albuminous, and contains colorless and some red blood-corpuscles. There is a degeneration of the inner portion of the epithelium, which undergoes granular degeneration, disintegration, and desquamation. The peripheral part of the epithelium, together with the nuclei which have not escaped into the lumen of the tube, remains as a small continuous layer upon the basement-membrane. The ascending portion of Henle's loop is least affected. The collecting tubes of the medullary substance undergo simple epithelial desquamation. Fibrinous casts are not usually found; but Eliaschoff believes that this is explicable by the early deaths of the animals, since the degenerated cells must eventually have formed casts. Eliaschoff believes that the action of cantharides occurs principally after the separation of the cantharides in the glomerulus. When cantharides is given, the effect is produced in about half an hour. In animals killed at this period the lesions are found in the glomerulus. Later, after two or three hours, the uriniferous tubules are affected. The changes can be attributed to the cantharides flowing down the lumen of the tubules. This was demonstrated by the venous injections of the indigo-sulphate of soda. The experiments show that the greater the interval between the administration of the cantharides and the indigo-sulphate of soda, the less coloring-matter will be eliminated by the injured tubules. The author contrasts the difference between cantharides and chromic-acid poisoning as throwing light upon the physiological action of cantharides.

In both forms there are changes in the glomeruli and uriniferous tubules, substantially the same, but there is in chromic-acid poisoning an absolute destruction of the secreting epithelium, with abundant formation of casts, whilst with cantharides, although there is degeneration of the epithelium, a peripheral layer of nucleated epithelium remains. In chromic-acid poisoning, therefore, it is probable that the hurtful substance is eliminated by the epithelium and destroys it while passing through. In cantharides poisoning, on the other hand, the drug apparently acts upon the epithelium from within the lumen of the tubules.

It would appear from the above account of the physiological action, and from the writings of Ringer, that cantharides may

act as an alterative stimulant upon the kidneys. In my own cases the diuretic effect has been satisfactory in many instances, and in some of the cases the specific gravity of the urine has increased under its use; but I think the former effect is all that can be said for it in my experience. Cantharides undoubtedly produces positive effects upon the genito-urinary tract, as well as upon the renal organs, warning us that its therapeutic use must be guided by discretion.

The treatment of Bright's diseases by diuretics has been justly superseded by the dietetic and diaphoretic measures now in use. There remain, however, cases in which it becomes an absolute necessity to endeavor to lessen the dropsy by acting directly upon the emunctories. Purgatives are objectionable on account of their irritant effect upon the digestive tract: besides, they entail considerable loss of strength. The diuretic substances often offend the stomach, and diaphoretics may not be available.

The purpose of this communication is to record, in an *experimental* manner, the possible uses of cantharides as a diuretic, and to show that, properly used, its action is not harmful. The renal conditions upon which I have found tincture of cantharides act favorably are those of chronic catarrhal nephritis combined with some interstitial process, and associated with more or less cardiac hypertrophy. It has proved decidedly less useful in cases in which the heart was feeble. In these cases it may still be rendered effective when combined with preparations of digitalis, although digitalis given alone was inoperative. I have never attempted its use in cases which possessed any acute element. In the cases of cardiac dropsy it was always given with digitalis, and, since its effects as shown by the physiological action (Eliaschoff) occur partly through its local action upon the renal secreting cells, it is reasonable to suppose that digitalis, by increasing the efficiency of the circulation, should increase the effect of cantharides as a diuretic. Certainly its small bulk renders it a convenient and acceptable drug to patients, whether adults or children.

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DR. THEOPHILIS PARVIN has been elected one of the Attending Obstetricians to the Philadelphia Hospital.

## A NEW APPARATUS FOR THE ESTIMATION OF UREA IN URINE BY THE HYPOBROMITE METHOD.

BY WILLIAM H. GREENE, M.D.

THE estimation of urea by the measurement of the volume of nitrogen disengaged when urine is mixed with a solution of sodium hypochlorite was proposed almost at the same time by Le Conte* and Davy.† Knop‡ replaced the hypochlorite by hypobromite, and Huefner,§ Magnier de la Source,‖ and Yvon¶ have devised special and admirable apparatus for the practice of the analysis.

The principle of the analysis is the same in all cases. A weighed or measured quantity of urine is mixed with an alkaline solution of sodium hypobromite: the urea at once decomposes into nitrogen and carbon dioxide, the latter is absorbed by the alkali, and the volume of nitrogen is measured. The quantity of urea contained in one hundred cubic centimetres of the urine is then calculated by the equation

$$x = \frac{100v\,(h - h')}{760 \times 354.3 \times a\,(1 + 0.003665t)}$$

in which $v$ is the volume of nitrogen, $h$ the barometric pressure in millimetres, $h'$ the tension in millimetres of aqueous vapor at the temperature $t$, and $a$ the volume of urine employed.

As suggested by Yvon, barometric and thermometric observations may be dispensed with, and the calculation greatly simplified, by making a simultaneous estimation of the nitrogen evolved from one centigramme of urea under the same circumstances. Let this last volume be $m$, and the volume disengaged from $v$ cubic centimetres of urine be $n$; then the number of centigrammes of urea in 100 c.c. of urine will be

$$x = \frac{100n}{mv}.$$

The different forms of apparatus that have been employed vary only as to the manner of mixing the urine with the hypobromite solution, and collecting the evolved gas. Several methods have been proposed and recommended, in which the decomposition is effected in a vessel con-

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* Comptes-Rendus, xlvii. 237.
† Philosophical Magazine, vii. 385.
‡ Zeits. An. Chem., ix. 225.
§ Jour. Prak. Chem., iii. 1.
‖ Bull. Soc. Chim., xxi. 290.
¶ Anal. chim. de l'Urine normale, Paris, 1875.

nected by means of a rubber tube with a graduated burette in which is measured the increased volume of gas due to the addition of the nitrogen to the air already contained. No great precision is attainable by any such apparatus, and at the same time the manipulation is no easier than with the apparatus of Huefner and that of Yvon, which yield exact results.

HUEFNER'S APPARATUS is in three pieces: the decomposition-tube is separated by a glass stop-cock into two portions. The contents of the lower and smaller division, including the hollow of the stop-cock, must be accurately determined. The upper chamber contains the hypobromite, and fitted to this by a ground joint is a hemispherical reservoir.

In the practice of the analysis the lower compartment and the hollow of the stop-cock are completely filled with the urine by the aid of a long funnel-tube. After closing the stop-cock, the upper compartment is filled with the sodium hypobromite solution diluted with its volume of water, and the reservoir is filled to a convenient height with a cold saturated solution of common salt. After all air-bubbles have disappeared, the graduated measuring-tube, filled likewise with common-salt solution, is placed in the reservoir over a little projection on the end of the decomposition-tube. On turning the stop-cock the urine passes into the hypobromite solution, and there is a tumultuous disengagement of gas. In about fifteen minutes the decomposition is complete; the measuring-tube is then closed with the finger and transferred to a deep jar filled with water, in which the volume of gas may be accurately read.

This apparatus is expensive and somewhat troublesome, but very accurate results may be obtained.

YVON'S APPARATUS is much less complex than the preceding. It consists of a straight tube, open at both ends, and provided with a stop-cock near the upper fourth. It is graduated in both directions from the stop-cock. This apparatus requires the use of a deep mercury-trough, into which the ureometer is plunged until the longer division is filled. The stop-cock is then closed, and one or more cubic centimetres of urine measured into the upper compartment and allowed to flow into the lower by raising the tube and opening the stop-cock; several cubic centimetres of sodium-hydrate solution are introduced in the same manner, for the purpose of rinsing all of the urine into the lower division. The upper compartment is then completely filled with hypobromite solution, which is rapidly passed into the urine by raising the tube and turning the stop-cock. The gas collects above the liquid on the mercury, and its volume is measured after bringing the mercury to the same level in the ureometer and the trough. Special care is necessary that no air-bubbles be allowed to enter while introducing the hypobromite solution: any that may enter before that time can be driven out by suitably depressing the tube in the trough, while the stop-cock is open.

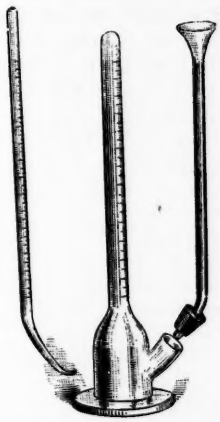
The manipulation and measuring with this apparatus are more rapid than with Huefner's, but require still greater precision. The results are exact.

A NEW UREOMETER. In order to simplify the apparatus and the necessary manipulations, I have devised the form shown in the figure on the opposite page. It consists of a small glass flask and measuring-tube in one piece. The flask is on a rather heavy base, to afford necessary stability.

The apparatus is completely filled with the hypobromite solution, and placed on a plate destined to receive the liquid which overflows during the analysis. By the aid of a pipette, of which the end is so bent that it may pass to the centre of the flask, a measured quantity of urine—one, two, or the desired number of cubic centimetres—is introduced, and the decomposition takes place as the liquids mix. The opening of the pipette must be so small that only three or four cubic centimetres run out per minute.

When the desired quantity of urine has been decomposed, a rather wide funnel-tube is adapted to the opening in the flask, and filled with hypobromite solution until the liquid is at the same level in the funnel-tube and the measuring-tube. The volume of gas is then read, and the necessary cal-

culation made; or an aqueous solution of one centigramme of urea may be introduced, and the increase in the volume of nitrogen may be compared with the volume yielded by the urine.



This apparatus will be comparatively inexpensive, and, with proper care that no urine is allowed to flow from the pipette until the end of the latter is well in the flask, the results are as exact as can be desired for all excepting the most precise physiological researches. The only objection is the rather large quantity of hypobromite solution required; but, as this is very cheap, the quantity used is of little consequence.

3225 Sansom Street.

## NOTES OF HOSPITAL PRACTICE.

### PHILADELPHIA HOSPITAL.

*SERVICE OF WILLIAM PEPPER, M.D., LL.D., ONE OF THE PHYSICIANS TO THE HOSPITAL, AND PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.*

Reported by William H. Morrison, M.D.

*ABSCESS IN THE RENAL REGION.*

GENTLEMEN,—This Italian was admitted to the hospital some time ago with a swelling in the left lumbar region. There was discoloration, heat, swelling, and tenderness. It was entirely clear that it was an abscess. The aspirator was employed, and thirty-two ounces of laudable pus withdrawn. The pain and temperature were greatly diminished, but the abscess gradually refilled, and two weeks after the first tapping the aspirator was again employed, and eight ounces of pus removed. Since that time the general health has steadily improved, and the abscess has refilled to a slight degree only.

What we were particularly concerned about was not merely as to the diagnosis of abscess, for that was a very simple affair, but it was as to the character and source of the abscess. By means of an interpreter, we obtained the statement that ten years ago this man had precisely the same kind of a swelling in the same place, following a strain, that it went on to suppuration, that it was lanced, the pus was evacuated, and the abscess closed, and that from that time until the present his health had continued good, when, without any adequate cause, a second abscess formed in the same region. The man is a wretched, broken-down specimen, as most of the Italians who come to the hospital are. They have been exposed to every cause of depraved health, and when they break down they come to us in a most miserable condition. We have been unable to obtain any other information as to the man's past history, and I am unable to say whether or not he has had syphilis.

In looking at this abscess, the thoughts which occurred to me were—(1) was it the result of disease of the bodies of the vertebræ? (2) was it connected in any way with the left kidney? or (3) was it a simple phlegmon, resulting from some injury in a man who was in a wretchedly depraved state of general health?

Observation showed that there was no curvature of the spine, no prominence of the spinal processes, and no special pain along the region of the spinal column. The history of an abscess occurring ten years ago and terminating in recovery was opposed to the idea that this was connected with serious organic disease of the bone, since in the adult a carious abscess of this character is, as a rule, very intractable, and is apt to continue running, until the patient is worn out by the disease. There seems to have been no difficulty about the cure of the first abscess, which, after being opened, readily healed.

The position of this abscess would suggest the possibility of its connection with the kidney. As we study the renal region more carefully, we find that suppurative inflammation of the kidney and of the connective tissue surrounding the organ is far more frequent than was formerly supposed. Perinephritis and perinephritic abscess are conditions far from rare. I have seen abscesses in the renal region which did not point in the back at all, but burrowed down along the spinal column, and their connection with the kidney-region was with great difficulty recognized. It was only by very careful percussion of the two renal regions, and a critical study of

the subjective symptoms of the patient and the evidences of pressure and irritation in the line of the ureter, that their true nature was recognized. In other cases, the collection of pus pointed in the lumbar region, outside of the line of the erector spinæ muscles. I have seen this in connection with suppurative pyelitis—that is, inflammation of the pelvis of the kidney—resulting from the presence of a calculus, and going on to suppuration, ulceration of the pelvis, perforation and the formation of an abscess around the kidney, communicating with the cavity of the pelvis of the kidney. I have even extracted calculi in the lumbar region outside of this line, and have seen this followed by healing of the fistula. In scrofulous children, in whom perinephritic abscess is more common than it is in adults, I have seen the abscess open in this situation, and the discharge continue until the abscess has healed or the patient has been worn out by the disease. I have had operations performed on the renal region, and pus evacuated which has evidently come from the kidney. In this case the abscess was very superficial, and the line of demarcation was quite definite. There was no pain on deep pressure in the left hypochondriac region. There were no symptoms of disorder of the urine. There was a history of an abscess in the past, which had terminated in recovery. Taking these points into consideration, we concluded that this was a curious instance of a recurring abscess in the subcutaneous connective tissue, but not connected with any serious deep-seated trouble.

The result of the case has shown the correctness of the diagnosis. There is now only a little fulness. There is some pus in the abscess; but the amount is small. If it should refill, a small opening will be made, and the abscess dressed antiseptically.

*MULTILOCULAR PLEURISY.*

This patient was before you about three weeks ago. He is an Italian, a laborer, and was admitted July 10. There is no known hereditary tendency to phthisis. He had had a slight cough for some time, but was otherwise well until a week before admission, when, after exposure, he was taken with a violent chill, followed by fever. The temperature on admission was 103.4°. There was likewise severe pain in the right side, and the signs of a pleural effusion were detected. He was tapped three times, but only small quantities of fluid were obtained. The first tapping removed three and a half ounces, and was followed by temporary improvement, the temperature falling to normal. In a week the former symptoms returned, with rise in temperature, and he was again tapped, and four ounces of fluid were drawn off. Improvement again occurred for about a week, when the former symptoms returned, and tapping was again resorted to, but this time no fluid was obtained. When this man was before you on the last occasion, I took the liberty of discussing with you, in the absence of my colleague, the propriety of these early and small tappings. There is a good deal to be said on both sides of the question.

Since you last saw him there has been a gradual improvement, until last week, when the temperature rose to 102° for a day or so. It has again fallen to the normal. The urine is fair in amount, acid in reaction, with a specific gravity of 1015, and contains a small amount of albumen, but no tube-casts. The treatment has consisted of iron, quinine, iodide of potassium, and flying blisters over the affected side.

When you last saw him, he looked wretched, anæmic, with an anxious expression of countenance; he had hectic fever, night-sweats, fever during the day, harassing cough, and very copious mucopurulent expectoration, which was so free that it almost filled a pint cup from early morning until ten o'clock. On examining the chest, I pointed out to you that there was over the posterior part of the right side flatness on percussion from the spine of the scapula down to the base of the chest, and from the line of the vertebræ around to the nipple-line in front, gradually sloping downward to one inch above the upper margin of the liver. Above this, in front, the chest was resonant. Over the upper part of the right chest in front, where there was good resonance on percussion, I found, on auscultation, numerous snoring and mucous râles. From the history we learn that this man, without any hereditary tendency to phthisis, had presented a cough for a certain length of time before the pleurisy developed; that the tappings which were performed had resulted in very small discharges of fluid; and that, although the last tapping

did not withdraw any liquid, the symptoms of chest-irritation continued, attended with an irregular type of fever, with continued loss of flesh and copious expectoration, so that we were forced to consider the question whether this pleurisy was an idiopathic and original affection occurring in a comparatively healthy man, or whether this man had incipient phthisis with intercurrent pleurisy, and whether the symptoms which were present were dependent upon continued pleural irritation or upon organic trouble in the lung. You will at once see how difficult it was at that stage of the disease to decide these questions. We came to the conclusion that, on the whole, the burden of evidence was favorable to the patient. The pleurisy was of that unusual form which is termed multilocular, or cystic, in which there is a great deal of fibrin, with comparatively little serum, the fibrin being so arranged in bands of false membrane as to break the pleural cavity into a number of smaller spaces, and the serum distributed through these spaces, so that although the symptoms indicated a considerable effusion, yet the punctures which were made only opened one of these small spaces and removed but a few ounces of fluid.

In this form of pleurisy the course of the case is always slow. It takes a long time for the plastic exudation to undergo organization, and while this process is in progress there will be more or less constitutional irritation and fever of an irregular hectic type. The character of the pleurisy justified us in hoping that the constitutional symptoms might prove to be largely due to the pleural inflammation. Again, although there were these râles at the apex of the right lung, yet there was no dulness on percussion, no evidence of consolidation, no increased fremitus, and no prolongation or blowing character of the expiration: so that it was possible that this was merely a local bronchitis.

The man was put to bed; blisters were employed over the affected side; he was given cod-liver oil, with nourishing food, iodide of potassium, and a moderate amount of stimulant. The albumen soon disappeared from the urine, and from that time the man has steadily improved.

There are still some coarse râles at the upper part of the right lung in front, but less numerous than they were. There is no dulness. The pulse is still weak. We shall place over the right apex a blister two inches square, continue the same treatment, and allow him to be out of bed for five or six hours during the middle of the day.

*PHTHISIS OF MODERATE SEVERITY COMPLICATED WITH PLEURAL EFFUSION—ASPIRATION.*

This man is 33 years old, and has been in the hospital nine months. He was at first under the care of Dr. Edward T. Bruen, who gives us the following account of the man while under his charge: "This patient was admitted in February last, with very few physical signs of any process in the lung, but at the same time he had a severe cough. After being in the wards for a week, he had a hemorrhage of several ounces from the lung. He then had repeated hemorrhages from week to week, which were very difficult to control. The physical signs were insignificant, and for two or three months it was difficult to demonstrate the presence of phthisis. As spring came on, the cough subsided, and at that time the signs of consolidation at the right apex presented themselves, but the signs of a cavity have never been detected." About two weeks ago he noticed a splashing sound on the left side. This was attended with a violent fit of shortness of breath. There has, then, been a history of phthis, followed by some complication.

This is the first time that I have seen the patient, and I shall examine him before you. As he is lying on his back, the resonance on the left side in front is almost tympanitic in character. On the right side it is normal down to the liver. When the patient sits up, the resonance posteriorly on the left side is good. On looking at the right side there is at once an appearance of distention of the chest, and on percussion flatness extends from the liver up to the line of the angle of the scapula. Placing my fingers on the chest and percussing, I feel a very distinct fluctuation. I have never before seen a case in which this sign was so marked. Now when the man is sitting up there is dulness in front on the right side, where before there was resonance. When the patient lies down, the resonance returns.

We have in this case phthisis of moderate severity, complicated with a large pleural effusion of the right side. This pleural effusion is so great and the muscular tissues are so weak that the diaphragm has been pushed down and the respiratory

muscles of the right chest paralyzed. This causes intense dyspnœa, and raises a very important question,—that is, whether or not in a case of pleurisy complicating phthisis the liquid shall be withdrawn by aspiration. Internal treatment and local applications rarely remove a large effusion in such cases. It is nearly always chronic and rebellious to treatment. Shall you, therefore, operate? This question cannot be answered in the same way in every case. You must be governed by the amount of disturbance which the effusion causes, by your knowledge of the form and extent of the lung-disease, by your judgment as to how much of the symptoms are dependent on the organic lung-disease and how much upon the pleurisy, and by the question whether the phthisis was rapidly progressing or comparatively stationary at the time the pleurisy developed. If the patient has been suffering greatly from phthisis, the disease making rapid progress, and pleurisy occurs, but the distress not being much increased by it, I should be in favor of not operating; but in such a case as the present one, where the physical signs are not marked and the course of the disease is not rapid, and a pleurisy with large effusion occurs, producing great distress, I am in favor of operating. I am in favor of it, no matter what the character of the effusion; but as to the mode of operating I should be governed by the character of the fluid. I shall pass a hypodermic needle into this chest, in order to determine the nature of the effusion. If it be pus, I shall simply evacuate it to-day, and see how rapidly the pleural cavity refills. If it be serum, I shall simply withdraw the fluid with the aspirator. The fluid which I have removed consists of serum containing a large amount of flaky material.

I shall now introduce the aspirating needle; but, as you see, only a little fluid escapes. This is due to the clogging of the tube with this flaky matter. This will break down into pus. It will be necessary on a future occasion to make a permanent opening. I shall withdraw the needle and insert it at a higher point, so as to get above these flakes, which have settled to the base of the chest. The liquid flows more freely now, and we shall be able to withdraw sufficient fluid to give a considerable temporary relief. As the hour has expired, I shall continue the aspiration after the patient has been taken to the ward, and report to you the quantity removed.

## TRANSLATIONS.

THE VIRUS OF GLANDERS.—M. Bouley read a report on the "Microbe of Glanders" before the Academy, in which he reviewed the evidence in favor of a particulate infection, and declared that experiment had demonstrated that this existed in the form of a bacillus, first recognized in the discharges by Christot and Kiéner in 1868, and subsequently demonstrated by cultivation experiments and inoculations made by M. Bouchard in conjunction with MM. Capitan and Charvin. In discussing this communication, M. Colin declared himself not convinced by the proofs yet adduced in favor of a specific bacillus. He declared that the virus of glanders is very persistent, and that the discharges contained many other things besides microbes, which might convey the infection, such as organic detritus, lymph-globules, micrococci, etc. He believed that the only legitimate conclusion that could be drawn from the experiments is that culture-liquids are able to transmit the poison of glanders, but he saw no proof of a special microbe. He insisted that the culture-experiments should be increased to hundreds, in order to eliminate other possible sources of contagion. He had examined the blood of persons dying of glanders, without detecting the bacillus. —*Revue de Thérapeut. Med.-Chir.*, November 15.

THE SUPRA-PUBIC OPERATION FOR LITHOTOMY.—In a discussion upon the high operation for the removal of stone from the bladder, at the Société de Chirurgie, while considering the report of a successful case by M. Desprès, M. Perier, from an experience based upon five operations, formulated the various steps for the operation, as follows:

1. Introduction of the tunnelled sound into the bladder, and discharge of the urine.

2. Application of an elastic ligature around the penis.

3. Introduction of the rubber balloon into the rectum.

4. Distention of the bladder by warm borated water.

5. Distention of the rectal balloon.

6. Free incision of the skin and subjacent tissue down to the vesical wall.

7. Opening of the bladder, keeping the incision gaping.

8. Extraction of the stone.

9. Depletion of the balloon, and withdrawal of the sound.

10. Examination of the vesical wall, and washing out the bladder.

11. Insertion of drainage-tubes.

12. Suturing the wound above the drainage-tubes, and dressing.

M. Perier attaches great importance to drainage, and to antiseptic washes of the bladder and the wound. He uses two tubes, side by side, through which the injections are made and the discharges and urine escape.—*Revue de Thérapeut.*, No. 22.

SUBCUTANEOUS RHEUMATIC NODOSITIES.—In a recent communication made to the Société Médicale des Hôpitaux, published in *Le Progrès Médical* (Nos. 47 and 48), M. E. Troisier calls attention to a rare and curious rheumatic manifestation,—subcutaneous nodosities which show themselves near the affected joints and along the tendons during an attack of articular rheumatism, or during convalescence, but which afterwards gradually disappear. Although Jaccoud has awarded to Froriep the credit of the first mention of these lesions, it is believed that the honor of first pointedly directing attention to them is due to Jaccoud himself, who described them under the title of *induration rhumatismale* in his classical work "Traité de Pathologie Externe," in which the clinical features are well delineated. These peculiar appearances are not of much significance, as the majority of them disappear in a few days; but their existence has been noticed by a number of observers.

EXPLANATION OF TOXIC EFFECTS OF IODOFORM.—In a contribution to the *Centralblatt für Chirurgie* (No. 48), Dr. G. Bouma, of Leyden, calls attention to the importance of examining all iodoform that is used for surgical purposes. Much of the drug found in the stores contains impurities, and from careful observation he is satisfied that the cases of iodoform-intoxication which have been reported from some clinics have been really due to the adulteration of the drug. In the clinic to which he is attached in Leyden, all the iodoform used is tested, and only *pure* iodoform is used. One specimen, which contained eight per cent. of impurities, after having been rejected, was sold in another city, and the result was noticed that serious toxic symptoms appeared in one-half of the major operations, whereas in Prof. van Iterson's clinic at Leyden, out of over three hundred cases in which pure iodoform was employed, only two presented symptoms of delirium, etc., and one with fatal results. Both of these were resections of the superior maxilla, in which tampons of iodoform-gauze had been used. Dr. Bouma is of the opinion that if iodoform be kept for a length of time exposed to light and air it may acquire poisonous properties.

URETHRO-RECTAL FISTULE — DEATH FROM URÆMIA.—Under the care of M. Desprès, at La Charité, was a case of a young man, 29 years of age, who had urethral stricture, and also a urethro-rectal fistule, probably due to a false passage caused by the injudicious use of instruments. The patient was much prostrated, and had a subnormal temperature. A very small quantity of urine was discharged by the urethra, but he had a troublesome diarrhœa, urine being discharged into the rectum. He died of chronic uræmia, and, in addition to the above-mentioned lesions, at the autopsy there were found chronic cystitis with ulceration, and contracted kidneys.

HYOSCIN IN NIGHT-SWEATING OF PHTHISIS.—Fraentzel found in twenty-nine cases of profuse sweating in phthisis, after failure of atropia, that hyoscin hydriodide in doses of $\frac{1}{120}$ to $\frac{1}{64}$ of a grain (or .0005 to .001) reduced the sweating decidedly in ten, stopped it completely in five, and in the remainder had no special effect.—*Charité Annalen*, No. VIII., and *Centralblatt für Medicinischen Wissenschaften.*

THE TANNATE OF CANNABIN AS AN HYPNOTIC.—The use of the tannate of cannabin is reported in Germany as a soporific agent. Its high price, at present, prevents its common employment instead of the extract, to which it is preferable, as it is claimed to be free from *tétano-cannabine*, a toxic convulsive principle contained in the plant.—*Revue de Thérapeutique*, December 1.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 12, 1884.

## EDITORIAL.

### INCISION AND DRAINAGE IN PURULENT PERICARDITIS.

WITH regard to operative surgical interference in pyopericardium, most authorities agree in considering it a delicate and hazardous operation, to be undertaken as a last resort, and only by means of the aspirator or a fine trocar and canula.

This treatment by the use of an exploring trocar was recommended by Bamberger and Friedreich, with the subsequent injection of chlorine-water or iodine, or irrigation by detergent antiseptic solutions, and is referred to also by Fothergill, who regarded it as a forlorn hope, but thought it capable of yielding relief. The practice approved by F. T. Roberts is that of removal of the purulent collection by the aspirator; but he gives this recommendation with the warning that it should not be rashly practised. Bristowe, who approves of surgical interference in pericardial suppuration, gives the details of the operation: the most eligible spot for puncture he considers to be one towards the inner extremity of the fourth or fifth interspace close to the sternum, and suggests that the tissues be divided with the scalpel, one by one, until the parietal layer of the pericardium is reached, and then to puncture carefully with a fine trocar and canula; believing it advisable also to wash out the cavity, he uses a weak solution of chlorinated soda or of potassium permanganate. The preliminary use of a fine aspirating needle for diagnostic purposes is suggested.

Dr. Austin Flint, Sr., says that in suppurative pericarditis aspiration is always indicated, but he also states that if after repeated aspirations pus continues to reaccumulate, it is very evident that a permanent opening into the pericardial cavity, with injections, affords the only hope of effecting a cure.

Dr. Samuel West, at a recent session of the Pathological Society of London, reported a case of purulent pericarditis treated by free incision, in a boy fourteen years of age: twenty-four ounces of pus were evacuated (*Medical Times and Gazette*, December 8, 1883). This makes the third case in which pericardium has been laid freely open for purulent pericarditis. Prof. Rosenstein reported the first case, of a boy whose pericardium had been opened and drained after it had been twice tapped, who recovered, in spite of a secondary attack of left-sided pleuritis. The second case had been under the care of Dr. Samuel West also; it was an idiopathic purulent pericarditis, in which the same treatment was followed by complete recovery. In the third case death occurred from other causes: the post-mortem showed a large abscess of the thigh; but the cavity of the pericardium had been nearly obliterated in the short space of two weeks. He expressed the opinion, in presenting this specimen for examination, that opening the pericardium is not a more hazardous proceeding than opening the pleura or the peritoneal cavity, if done with the same precautions.

### BOTH BANE AND ANTIDOTE.

WITHIN a few days the coroner of Philadelphia has been called upon, in the course of his duties, to investigate the death of a man who, after drinking a quart of whiskey on a wager, died in consequence in the course of a few hours with acute alcohol-poisoning. This case is not cited for its rarity, because similar cases are already on record illustrating the toxic powers of alcohol, but it is mentioned in order to point out a possible danger in the treatment of a patient who has been bitten by a venomous reptile. Dr. H. H. Hulke,

in a recent communication to the *St. Louis Courier of Medicine*, urges the trial of quinina as a substitute for at least a part of the whiskey usually given to cases of snake-bite, and expresses the opinion that there can be little doubt that more persons are killed by the enormous amount of whiskey they drink, when bitten by a snake, than from the effects of the bite itself. A general recognition of alcohol as a toxic agent, capable by its own effects of destroying life when introduced into the system in immoderate amounts, will greatly assist the community in appreciating the fact that, in smaller amounts than those capable of promptly destroying life, it may, and generally does, exert injurious effects upon the human frame. If the false sentiment which accompanies the use of this agent could be corrected, the consumption of intoxicating alcoholic drinks would be enormously reduced.

## HYDROPHOBIA AND THE CRITICS.

TWO articles relating to hydrophobia, or, more correctly, rabies canina, appear in our columns in this issue,—one containing Criticisms on the Specific Theory of Hydrophobia, the other a criticism upon this paper by a valued correspondent, who prefers to be impersonal, so that his arguments may stand for themselves and be taken at their worth. Both are able communications, and will be read with interest. We therefore regret that want of space compelled us to omit a part of the original paper, consisting principally, however, of quotations from authorities. An analysis of Dr. Dulles's paper shows evidences of great industry and patience in reviewing the literature of the disease. In the first place, he has collected a number of curious mistakes in diagnosis, and of erroneous observations, both ancient and modern, concerning the pathology of hydrophobia; and, secondly, he reports that neither his individual studies nor those of other modern pathologists have succeeded in establishing any characteristic morbid anatomy belonging to rabies. The changes found in the brain and medulla had no pathological characters whatever, such as could be recognized as the lesions of the disease. Upon facts and observations such as these, gathered during two years' study of the subject, and given in his essay, the lecturer bases the remarkable opinion that "hydrophobia is not a specific, inoculable disease derived from the bite of a similarly affected animal." Unless the author attaches some peculiar meaning to the term "special," it would seem that his views cannot be harmonized with what is known clinically of rabies: they certainly are not the natural sequence of anything contained in his communication.

Our correspondent, in criticising this view, simply reaffirms what are considered as well-established facts with regard to the pathology of hydrophobia, and expresses some truths with regard to medical logic which can scarcely be too often repeated. We think that we can accept the statement that nothing characteristic has been observed regarding the pathology of hydrophobia; but we should hesitate before adopting the view that therefore such a specific disease does not exist. How long had typhoid fever existed before its characteristic lesions were recognized by Petit and by Louis? Was there no albuminuria before Bright discovered its dependence upon renal disease?

## NOTES FROM SPECIAL CORRESPONDENTS.

### COLUMBUS, OHIO.

EDITOR PHILADELPHIA MEDICAL TIMES:

THE Central Ohio Medical Society held its regular meeting in December. Dr. J. N. Beach presented a stomach somewhat dilated and with a large cancerous (?) deposit at the pyloric end. The walls at this point were over an inch in thickness, but the microscope had not been invoked to decide

between carcinoma and fibroid thickening. The history of the case was its noteworthy feature. Attention had first been drawn to the abdomen by the occurrence of ascites. After the withdrawal of a large amount of fluid, the tumor was discovered. Nevertheless, during the whole course of the disease, until death occurred from progressive emaciation, the patient had neither pain, vomiting, nor hemorrhage. The occurrence of disease without classical symptoms was further illustrated by the report of a case by Dr. H. G. Landis. A multipara was suddenly attacked by vomiting and diarrhœa, the latter soon ceasing spontaneously. She had menstruated regularly up to date, and at the time when seized was having a slight show at the proper time. She had no pain, not even tenderness on pressure, no interference with micturition, and yet examination a few days later revealed a gravid retroverted womb incarcerated in the pelvis and replaced with difficulty. Pregnancy had advanced to three months. The vomiting ceased after the liberation of the womb. The Stagyrite has declared that it is a part of probability that many improbable things will happen. This was illustrated by a case reported by Dr. T. W. Jones. A ten-year old child ate freely of raw oysters. During the following week symptoms of indigestion, with fever, were present, and the mother administered sundry vermifuges without effect. Dr. Jones, being called in ten days after the molluscous repast, gave calomel and rhubarb, but without present effect. Five days later, making *fifteen* days in all, he succeeded in bringing away a large stool, in which were at least twenty raw oysters, having an odor contracted from their recent habitation, but otherwise as good as new. The account was received with marks of incredulity, as evinced by a cross-fire of questioning, well borne by the venerable reporter, and further investigation was requested. After the meeting, Dr. J. F. Baldwin accompanied the doctor to the scene of action, and failed to find anything to disprove this remarkable fact. Dr. E. B. Pratt narrated the case of a bibulous shoemaker who during an attack of delirium tremens vomited many raw oysters which had been swallowed one week before. Those who have been relying upon the self-digestibility of raw oysters will now have to pause in their mad career long enough to bite into the animal's interior. At the afternoon session Dr. Warner, a candidate for membership, read a paper upon pleurisy, which had the desired effect. Dr. Kinsman illustrated one of Dr. Da Costa's sayings by reading a paper upon consumption, which was duly discussed. The scientific work being over, resolutions were read favoring the establishment of a State Board of Examiners, who shall have exclusive power to confer the right to practise medicine in the State, and who shall make a more thorough course of study obligatory. The discussion was opened by Dr. H. J. Sharp. He spoke at length of the low estate of the profession, comparing it with that of Europe, and claiming that the legislation contemplated in the resolutions would give us a higher order of ability in the profession. The discussion continued in the same vein until Dr. Starling Loving called attention to a few points, especially with reference to medical colleges. He averred that the fault was less with the colleges than with the profession at large, who for a paltry fee will take any one into their offices and then send him to a college to be made into a physician. If no physician would admit into his office a student who has not a liberal education, the colleges would be supplied with proper material. Further discussion was postponed until the January meeting.

COLON.

## CORRESPONDENCE.

### A CRITICISM ON A PAPER ENTITLED "CRITICISMS ON THE SPECIFIC THEORY OF HYDROPHOBIA."

MR. EDITOR,—Argument will scarcely fail among men as long as there are doctrines to be accepted or attacked, but it seems scarcely worth while to spend much time in proving the existence of a disease that has been known so many years and presents such distinctive clinical features as hydrophobia, merely because some one denies its existence.

We are reminded that a little book, published some seventy years ago, was the cause of much amusement from the mistakes of others respecting its nature and object. At the present day it is looked upon and valued as a literary *jeu d'esprit*. The book referred to is Whately's "Historic Doubts relative to Napoleon Bonaparte," in which, arguing exactly as Hume has done in his Essay on Miracles, the author proves that the existence of Napoleon Bonaparte is, to say the least, quite doubtful.

When anything we are asked to believe is "passing strange," we rightly demand that the witnesses in the case shall possess the following most important qualifications: first, they must have the means of gaining correct information; secondly, they must have no interest in concealing truth or propagating falsehood; and, thirdly, they must agree in their testimony.

Those on whose testimony the existence and actions of Bonaparte—the most extraordinary figure in modern history—are generally believed, fail in all these essential points: we have no assurance that they had access to correct information, they had an apparent interest in propagating falsehoods, and they

palpably contradict each other on most important points.

Very many men readily believe, and on slight evidence, any story that pleases their imagination by its admirable and marvellous character. This hasty credulity is unworthy, however, of a philosophical mind, and in proportion to the strangeness of the account should we suspend our judgment and yield to none but the most decisive and unimpeachable proofs.

Some years ago, four medical men of large experience were dining in this country with Mr. Spencer Wells, when one of them was offered a peach. He declined it, and gave as his reason for so doing that he was afraid to eat one, lest it should bring on a paroxysm of ague. Mr. Wells was emphatic in his disbelief of there being any danger to be apprehended; but the three other medical men said they knew by experience that there was. The peach was eaten, and the paroxysm followed. Mr. Wells said afterwards, when referring to this consequence of peach-eating, that he never had had lockjaw to occur after his operations except in three cases, and their history was as follows. Operating for ovariotomy, he found he had no director. Mr. Henry Smith opened his pocket-case and gave him one. That patient died of lockjaw, and the next two died of lockjaw; and Mr. Wells added that Henry Smith was then Fergusson's assistant, that Fergusson had used that director, and Fergusson then had lockjaw in his practice. To the inquiry as to whether he believed that lockjaw could be carried and communicated from one patient to another, Mr. Wells answered only *that some things were very hard to explain.*

Now, just as the peach was eaten with misgiving, so we are sure that Mr. Wells, if he used the instrument at all after what he had witnessed, would do it with great reluctance, although he might not *believe* that lockjaw is carried on an instrument, and could give no satisfactory explanation of it if he did.

Now, it is worth bearing in mind that a thing may be true without our having any satisfactory explanation of it; and, on the other hand, an explanation of a thing may long be accepted as entirely satisfactory and yet not be true at all. When the system of Copernicus was first announced, it was declared that the earth could not be turning round on its axis, for in that case a stone let fall from the top of an eminence would come in contact with the ground at a distance to the west, *in the same way as a stone dropped from the top of a mast in a rapidly-sailing ship falls on the deck near to the stern.* An answer that was satisfactory *for one hundred years* was this: A stone, being a part of the earth, obeys the same laws and moves with it; it is not a part of the ship, and consequently its motion is independent. When the experiment was tried, a hundred years after this explanation was accepted, the stone dropped from the mast-head fell at the foot.

An accepted explanation does not declare the truth of an assertion. Moreover, something may be true, and yet the explanation be incorrect,—be, indeed, most plainly absurd. The accounts given in ancient writers of earthquakes and volcanic eruptions can be admitted to be true, notwithstanding their being attributed to the violent efforts of imprisoned giants to effect their escape.

From the most ancient times certain diseases have been held to be *contagious*,—that is, to be communicable, preserving special characters, from a diseased person to a healthy one. As far back as the books of Moses, indeed, we see evidence of this. A satisfactory explanation of the cause of the contagiousness was not given until the time of Fracastor, who attributed it to a specific virus; and down to the present day it is universally admitted that there does exist in certain diseases a peculiar morbid product, called *virus*, which possesses the faculty of contagion, and the smallest quantity of which, under certain circumstances, is able to develop the same disease. Syphilis, smallpox, vaccine disease, have a virulent liquid, the existence of which no one can doubt at the present day. In rabies also there is one, how prepared in the salivary glands we know not. In scarlatina, measles, diphtheria, and cholera there is also a something by which the disease may be communicated; though what this is, whether bacillar or not, is not yet well determined. Certain atmospheric and other conditions have a very great influence upon the contagiousness of these diseases,—far more, certainly, than on those first mentioned. For all disease-germs are not alike, any more than are the seeds of plants or the ova of animals. Some vegetable-seeds must be planted in one season, some in another; some near to the surface of the ground, others more deeply; some need one soil, others a different one; and while some need a hot sun, others require shade and dampness. As to animals, what a difference exists between the requirements for the fecundation of the ova of fish, of frogs, and of mammals!

In his lectures upon diphtheria, Trousseau recalls such facts as these, and declares, emphatically, *that we ought to be very careful, very sober* (*très-sobres*), *in our reasonings against contagion.*

The disease known as hydrophobia—the hydrophobia communicated by the bite of a mad dog—is extraordinary. It is mainly so, however, be it noticed, on account of its horrible characters and its utter hopelessness; for there is nothing uncommon in the bite of an animal being followed by dangerous consequences from the introduction of a peculiar venom, nor is there anything unusual in a

poison acting on particular portions of the nervous system.

Were this disease, however, a thousand times more extraordinary, were it the sole instance known of fatal consequences resulting from an animal virus, we have abundant reason for not denying the fact of its existence from witnesses of whose qualifications, opportunities, and thorough disinterestedness there can be no question. They may, and of course they do, differ about treatment, and about the mode of action of the virus; some, unfortunately, class together under the general head of hydrophobia, cases where there is a simple horror of liquids, those of sympathetic hydrophobia, and those of spontaneous rabies, or rabiform hydrophobia together with those of true hydrophobia from the bite of a mad dog. All agree, however, in regard to the all-important point—the only one here in question—that there is a fearful disease communicated to man by the bite of a rabid animal. That every man who is bitten by a mad dog does not take hydrophobia is a matter of course, for, as remarked above, every seed requires certain conditions for its development; but that some do is a fact in regard to which there must be no question in the mind of a man willing and capable of reasoning correctly. Even if, with foolish reliance upon his own conclusions, a man should try the experiment of suffering himself to be bitten by a rabid animal, and no harm follow, this negative result would not invalidate the thousand positive results in the slightest degree. Everywhere and always—*ubique et semper*—this fact is known. Celsus, Morgagni, John Hunter, Dupuytren, Meade, Chomel, report to us this same fact. And at the present moment there are only too many able and ready to add to this testimony. No one, with such unexceptionable, such overwhelming evidence, must doubt *the facts*.

If any one should choose to uphold such a doctrine as that of the non-contagiousness of rabies as a literary mystification, as a *jeu d'esprit*, like the one of the Archbishop of Dublin referred to, both his judgment and his taste might be called in question. It may well be said that it is in the highest degree improper, for amusement's sake, to teach so dangerous a doctrine as this, that "no such disease as hydrophobia exists or can be caused by the bite of a dog under any circumstances." U. LYSSES.

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THE PHILADELPHIA MEDICAL REGISTER AND DIRECTORY for 1884 is now preparing, in the hands of Dr. William B. Atkinson, Price, by subscription, $1.00.

THE ALUMNI ASSOCIATION OF THE JEFFERSON MEDICAL COLLEGE will give an informal reception to Prof. Parvin on the 28th of this month, to which the resident alumni will be invited.

# PROCEEDINGS OF SOCIETIES.

## COLLEGE OF PHYSICIANS.

A MEETING of the College of Physicians was held December 5, 1883, Dr. ALFRED STILLÉ, President, in the chair.

Dr. JOHN H. PACKARD read a report of a

### CASE OF ABDOMINAL TUMOR, SOMEWHAT RESEMBLING PREGNANCY, IN A YOUNG MARRIED WOMAN.

I venture to hope that the following report of a case presenting some unusual features may be of sufficient interest to warrant me in bringing it before the College:

Mrs. G., æt. 21, a very slim and delicate-looking woman, consulted me on the 21st of July in regard to a slight and uniform abdominal enlargement, which had been first noticed by her shortly after her marriage about three months previously, and had been gradually and steadily increasing. She menstruated regularly every month, and had had no nausea. Neither the breasts nor the nipples showed any change from the virgin state.

There was no tenderness at any point in the abdomen, and the appearance and feel of the swelling were very much such as would be presented in the early stages of pregnancy.

On the 26th I saw her again, and made an examination per vaginam. The os uteri was soft, and the cervix was of some length; but there was a bulging above, as if the uterus contained a mass partly solid and partly liquid. I did not, of course, think it right at this time to introduce a sound, as, in spite of the absence of rational signs, the presumption seemed to me to be in favor of pregnancy. One fact seemed to militate against this view,—viz., that she rather lost than gained flesh.

I declined to express any opinion as to the character of the swelling, but told the husband that my hope was that the case would prove to be one of pregnancy, as it was likely otherwise to be very grave.

There was a good deal of pain on either side of the hypogastrium, apparently due to tension of the muscles; this was temporarily relieved by the use of chloroform liniment. She had very little appetite, and I gave her a tonic composed of nux vomica and gentian.

The swelling continued to progress steadily, and on September 13 she presented the appearance of being at about the middle of the fifth month of gestation. The hypogastric pain troubled her greatly, and was only allayed for a very short time after each application of the liniment.

At the desire of the family, I now asked and obtained the advice of Dr. Ellwood Wilson, who saw her with me on September 15.

In the forty-eight hours which had elapsed between my previous visit and this one a very marked change had taken place. The abdomen had become greatly enlarged, its walls

forming one curve from the ensiform cartilage to the pubes; there was very decided fluctuation, and percussion showed an area of dulness which was attributed by Dr. Wilson to the existence of a cystic tumor connected either with the Fallopian tube or with the broad ligament. A sound was introduced into the uterus, the cavity of which was found to be unoccupied. Dr. Wilson advised the drawing off of the liquid, which was accordingly done, by aspiration, on the 17th. More than a gallon of ropy, yellow liquid, somewhat deeply tinged with blood, was thus removed; the flow then ceased, and the end of the canula encountered a solid substance, apparently a septum of considerable thickness. Upon the withdrawal of the instrument a fresh flow took place, the liquid spouting out from the orifice to a distance of several inches. When this subsided, the abdomen, which was much less tense, was covered with raw cotton, and a bandage carefully and firmly applied.

During the operation the patient became quite faint, but rallied after the administration of a little brandy-and-water. In the evening her temperature rose to 103.5°, but before morning it fell to about 100°. She slept very little, and complained of much pain, due partly to the stiffening of the cotton and bandage by the agglutination of some of the liquid which oozed from the belly. On examining the wound in the morning, it was found closed.

The following evening the temperature again rose to 103.5°, but subsided again before morning, and was not thereafter above 99°. Yet her condition was unsatisfactory: her face was much pinched and anxious; she had very little appetite or ability to take food; at times her mind wandered slightly, and she slept but little. Vomiting occurred frequently, and she was seldom free from nausea. Her bowels acted regularly; her urine was free, and normal in every respect. Her pulse varied, but was generally from 110 to 120.

Beef-tea, and milk, with brandy and lime-water and champagne, were given at as short intervals as the stomach could bear them, and at stated times. External warmth was carefully kept up.

It was determined that should symptoms of peritonitis present themselves, ovariotomy should be at once resorted to.

A portion of the liquid was submitted to Dr. H. F. Formad for examination, and his report, which was not received until some time after the case had terminated, was, "I think it very doubtful that it comes from an ovarian cyst, the fluid showing very little epithelium and very few of the ovarian cells of Drysdale."

September 23, her condition was very much more favorable; her mind was composed and even cheerful; her pulse and temperature were good. Some food had been taken and retained.

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On the 24th her state was much the same, and it was thought proper to entertain the idea of an operation for the removal of the supposed ovarian tumor. In the afternoon Dr. Agnew saw her with Dr. Wilson and myself, and it was decided that the attempt should be made on the following day.

Accordingly, on the 25th, at noon, ether was administered by Dr. G. P. Sargent, of Bryn Mawr, and, in the presence of Drs. Wilson and Agnew, I opened the abdomen by an incision in the median line. After dividing the wall, I came to what seemed to be a cyst, and passed in an ovariotomy trocar, when a very free evacuation of liquid, straw-colored and ropy, but clear, took place. It was now apparent that the liquid was contained in the peritoneal cavity, and that there was a large solid mass lying among the intestines. This tumor was soft and doughy, like a placenta; it seemed to belong to the mesentery, since, although somewhat movable, it was firmly attached to the posterior wall of the abdomen, rather high up. The surface of the mass having been slightly lacerated, there was somewhat free bleeding, which was checked with some difficulty by ligation with carbolized catgut, and by the application of a cautery-iron.

The wound was now closed with two large pins and a ligature cast around them, and with metallic sutures; a sheet of raw cotton was applied over the whole belly, and secured by a bandage.

The patient rallied considerably, and, after the effects of the ether had passed off, became quite sensible; but she soon began to sink, and died on the 27th, about forty-eight hours after the operation.

No autopsy could be obtained, so that the exact nature and connections of the tumor must remain a matter of conjecture.

The notable points in the case now detailed seem to me to be the occurrence of a solid tumor, probably of malignant character, and apparently connected with the mesentery, in a young woman recently married; its resemblance in its physical appearances to the pregnant womb; the very sudden change that took place by a fresh effusion into the peritoneal cavity, and the obscurity which even then existed as to the real nature of the case. Even with the most accurate diagnosis, effective treatment would have been out of the question; and I cannot but think that my suspicion of pregnancy, erroneous as it proved to be, really prolonged the patient's life, which would have been almost necessarily sacrificed by earlier interference.

### CRITICISMS ON THE SPECIFIC THEORY OF HYDROPHOBIA.

Dr. CHARLES W. DULLES read a communication upon hydrophobia, reaffirming the views expressed in a paper entitled "Remarks on Hydrophobia," which appeared in

the *Philadelphia Medical Times*, August 11, 1883. He stated that he was sure that the attitude of severe criticism seems to offer the only hope for the solution of the riddle of hydrophobia; since, in more than two thousand years, the acceptation and repetition of authoritative opinions have failed to furnish a theory which does not fly in the face of all analogy, or a practice which holds out a reasonable hope of saving a single life. Such is the real state of knowledge in regard to hydrophobia. The theories as to its nature are contradictory and illogical; the teachings as to its treatment are without the slightest hope of success. In regard to both, the ablest men who have discussed it occasionally or systematically are in irreconcilable opposition. While some hold to certain modes of communication, others strenuously deny them. While some admit its spontaneous origin, others will not admit it for a moment. While some think the virus is to be found in the saliva, the blood, the bronchial mucus, the milk, the flesh, of rabid animals, others limit it to the first of these alone. In regard to the period of incubation the widest divergence of opinion exists. The range is from one day to forty years, and no one seems to have been able to fix a limit to either its shortness or its length. Equal contradiction meets the gaze when one turns to the matter of treatment. [Here he cited a number of authorities, both ancient and modern, who offer the most varied and even absurd recommendations.]

These citations illustrate the most remarkable feature of the literature of hydrophobia. It would seem as if, when once the mind has accepted a theory which contradicts all experience in other and fairly well understood diseases, it loses the ability to distinguish good evidence from bad. A striking illustration of this is furnished by Dr. Dolan, in his otherwise capital book on "Hydrophobia or Rabies." In his second chapter this writer calls attention in detail to the rules laid down by Dr. Abercrombie in his "Inquiries concerning the Intellectual Powers and the Investigation of Truth." These warn against the following fallacies: 1. Receiving as facts statements which are not facts, but opinions. 2. Receiving as facts statements which only assume the relation of facts. 3. Receiving as facts general statements, or the generalization of facts. Dr. Dolan then says, "Some writers, for instance, have maintained with much confidence that a particular state of rigidity of some of the limbs is distinctly characteristic of *ramollissement* of the brain. But further observation has shown that the disease may exist without this symptom, and that this condition of the limbs may appear in connection with other diseases. This observation of facts was in so far correct that this state of limbs does very often accompany *ramollissement* of the brain: the error consisted in giving it as a general fact, or a fact applicable to all cases of *ramollissement*, which is without foundation. Yet such statements, when brought forward with confidence, are often received as facts and rested upon as established principles; and then the facts by which their fallacy might be detected are apt to be overlooked or forgotten." To this reference to the commonest sources of fallacy Dr. Dolan adds, "We are arming our readers against ourselves." And yet he goes on, apparently with his eyes wide open, to reproduce the fault he has just pointed out in speaking of *ramollissement*, accepting statements which ought not to be entertained for a moment in the discussion of so grave and delicate a subject, and admitting as genuine cases which are transparently spurious. Dr. Dulles then gave in detail the report of a case reported by Romberg. This case was declared not to be hydrophobia. He said that he had selected an illustration of the point which he wished to make which should include two names well known and justly distinguished, because their very excellences add force to the proof they furnish that the prepossession of a theory which at the outset demands a certain surrender of the judgment will impair the freedom of the judgment at every subsequent step. Such, it seemed to him, is the condition in which every believer in the specific nature of hydrophobia stands. The assumption of a specific virus, which, and which alone, is the originator of the disease in any individual, compels its adherents to bend their judgment to accept the belief that there is a virus which behaves in a way contradictory to that of every other virus about which we have any positive knowledge. As Lorinser has said (*Wien. Med. Wochenschrift*, 1874), "We know very well the appearances produced, for example, by the bite of poisonous serpents, or by the poisoning of wounds with the poison of glanders, anthrax, syphilis, or cadaveric poison. There are, in general, always the manifestations of more or less rapidly developed inflammation, and of further distribution of the poison through the lymphatics, veins, and lymphatic glands, which organs then, in like manner, manifest similar inflammatory symptoms. Nothing of the kind do we see in wounds made by the bites of mad dogs," etc. And, again, "We know, in all pathology, not a single infective disease which, in regard to the time and symptoms of development, bears the slightest resemblance to hydrophobia."

One might suppose that such a contradiction would lead observers to be constantly on the lookout to find some other way of explaining the phenomena of hydrophobia, and that everything that was presented as evidence in support of it would be subjected to the most rigid scrutiny. But the literature of the subject shows that the very opposite is the case. The *post hoc propter hoc* argument

is the one which rules here. A careful perusal of a large number of recorded cases leaves the impression that they have not been studied with any idea that they might be something else than what they appeared to be. Though it is no secret that the dread of water is a symptom of a great variety of affections, one finds over and over again the ablest men resting a diagnosis on this which is acknowledged by most systematic writers to be the least reliable of its signs. Another thing which had struck them in examining the records of cases is the readiness with which reporters, aware of the objection so often raised of the effect of mental influence, accept the statements of friends or the silence of patients in regard to it as evidence that it does not exist.

Another curious thing to be observed in the literature of hydrophobia is the way in which the madness of the dog is often—one might say usually—deduced from the diagnosis of hydrophobia in the man, instead of the diagnosis of hydrophobia being made to rest upon reliable evidence that the dog was really mad. It is uncommon to find any proof whatever that a dog to which hydrophobia is attributed was rabid, this being, with rare exceptions, a pure assumption. The one phenomenon of a dread of water usually determines the conviction of the physician that he has a case of hydrophobia before him, and settles his opinion of any dog that may ever have bitten the patient and cannot now be accounted for. Nay, more, this mode of reasoning has led certain writers to the assertion that there may be a passing state in dogs in which they may communicate to a human being hydrophobia, but themselves recover. Thus is the struggle to support the specific theory kept up when circumstances seem to be most adverse to it.

Once more, and I am done for this occasion with objections to the anomalies which one meets in examining the basis upon which the general belief in regard to hydrophobia rests. I find in the recorded cases—with very rare exceptions—that, when once hydrophobia is suspected, every phenomenon that occurs during life, every lesion that is found post mortem, is unhesitatingly set down as a feature of this disorder, and the idea does not seem to be entertained that many of them are grounds of suspicion that some other disorder is present. In this way all lines of distinction between hydrophobia and disorders which simulate it are erased, and it remains for every medical man who is called to a patient who has a dread of water, accompanied with exaltation of reflex excitability, to inquire for a bite or scratch of a dog or cat; if one cannot be drawn out, to assume that it has been received and forgotten, then to make a diagnosis of hydrophobia, after which it is only necessary for the patient to die to make a complete record. If to this be added a careful microscopical examination of the state of the brain and spinal cord, the observer will have an exact counterpart of the process by which the famous conclusions of certain investigators—often quoted by those who have not taken the pains to go to the evidence upon which they are founded—were arrived at.

This suggests a brief consideration of the pathological lesions of hydrophobia. Notwithstanding all the diligent endeavors made to learn something from the post-mortem examination of the bodies of dogs and men that have died of rabies or hydrophobia, one might to-day adopt the language of Dr. Hart, who declares (Cooper's "Surgical Dictionary," art. "Hydrophobia") that these examinations afford "little else than a varied mass of symptoms, common to other nervous and blood disorders," and fail to "throw any clear light on the pathology of the disease."

I will not trouble you with the disappointed anticipations of the ancients in this connection; those of modern times are more instructive. The announcement by Hallier, in 1872, of the discovery of a micrococcus which was the germ of hydrophobia, and to which he gave the positive name of "lyssophyton," and the belief of Klebs in the parasitic nature of the granular elements found around the blood-vessels near the scar, have appeared and disappeared within the last decade. The hasty statement of Pasteur that he had obtained from the saliva of a patient dying of rabies a peculiar germ which, when he had cultivated it and inoculated the product, gave rise to a hitherto unknown disease, he was compelled to withdraw almost as soon as he had made it.*

The investigations of Benedikt, Coats, and Gowers are of the greatest interest in connection with this part of our subject. They are often spoken of as if their results were identical and conclusive, although, in fact, they are neither. Dr. Benedikt published his investigations in 1875 in *Virchow's Archiv*. The text is accompanied with a plate which leaves little room for misunderstanding the author's meaning. The lesions described and figured consist of a perivascular exudation or extravasation (or both) of *red* blood-corpuscles, miliary spots of finely granular degeneration of the brain-substance, "miliary abscesses," and melting down of effusions so as to make hyaline bodies alongside of the blood-vessels, often closing their lumen; while the vessels had a pigmented encasement (*Pigmenthülle*), made up of red blood-corpuscles. These lesions were found in both dogs and men. Dr. Coats published his discoveries in

* Nothing daunted by the experience of others, I observe that Dr. Paul Gibier reported to the Académie des Sciences of Paris, June 11, 1883, that he had found a special organism in the rachidian fluid of animals that had died of rabies, and that the virus could be attenuated by means of cold. Another of the conclusions he announced at that time was that the disease is communicable from mother to fœtus.

the *Medico-Chirurgical Transactions* in 1878, accompanied also with plates. His investigations referred to tetanus and hydrophobia. He makes a point of the analogies between these two disorders, and, assuming a virus in hydrophobia, he argues backwards that there is a poison circulating in the blood in tetanus. The lesions he describes in hydrophobia consist of a perivascular infiltration with *white* blood-corpuscles.

In comparing these investigations, it is to be noted that the lesions Coats found in tetanus correspond much more closely with those Benedikt found in hydrophobia than do those the former found in his investigation of this latter disorder. Further, it is to be noted that he describes the perivascular infiltrate as consisting of *white* corpuscles, while Benedikt is clear in describing it as made up of *red* corpuscles. Finally, Coats does not consider (though most persons who refer to him speak as if he did) the lesions he found to be distinctive of hydrophobia, but simply evidence of irritation in the blood. Thus we see that these two investigators cannot be regarded as confirming each other.

Now, the association of the name of Dr. Gowers (whose investigations are described and illustrated in the *Transactions of the Pathological Society of London*, vol. xxviii., 1877) with those of Benedikt and Coats, as having found lesions pathognomonic of hydrophobia, is equally unwarranted, for he distinctly stated, in answer to a question at the meeting where he demonstrated his specimens (*Lancet*, June 9, 1877, p. 840), that his investigation did not lead him to believe there was any special lesion in hydrophobia.

But, inconclusive and conflicting as the results of all these careful investigations have been, it might be easy to see how they might be taken for more than they are worth, if it were not for the fact that they have been formally and categorically vitiated by the subsequent investigations of others. Thus, Middleton (*Journal of Anatomy and Physiology*, 1881) has published the results of microscopical examinations in which he found perivascular aggregations of round-cells in two cases of hydrophobia, corroborating some of the appearances described by Benedikt, but disagreeing with Coats and Kolesnikoff in essential points. But the most striking point of his publication lies in the fact that he found the same morbid appearances which were present in the cases of hydrophobia, in cases of purpura hæmorrhagica, diabetes, fracture of the skull, erysipelas, head-injury with hæmatoma, concussion of the brain with fracture of the spine, delirium tremens, peritonitis, tubercular meningitis, mental deficiency and excitement, hæmatoma, tetanus, and uræmia. His paper concludes with the distinct avowal that, "As regards the pathology of hydrophobia, it still remains true that nothing characteristic has been observed."

Another investigator, who has gone over this ground, and come to conclusions as destructive as those of Middleton, is Ivanoff, who says (*London Medical Record*, March 15, 1883, from *Vratch*, 1882, No. 15) that similar appearances to those observed by Benedikt, Gowers, and others are found in typhoid fever. One of the supposed characteristics, the transparent spaces, he says, was found by Popoff and Stephanoff in uræmia, and by Vinogradoff in intermittent fever, by Danillo in phosphorus-poisoning, and by himself and Dr. Czorkov in the brains of healthy dogs. They have no pathological character whatever.

But I need not detain you with further references to more or less famous investigations. I will only add that they all tend to confirm the opinion that as yet no gross or microscopical lesion has been discovered which can be regarded as pathognomonic of rabies or hydrophobia.

And now I must close. I have not said so much because it is any pleasanter or is likely to be any easier for me than for others to differ from the majority in the branch of science to which my life is given. It is with shrinking that I take a position which, if it is deemed worthy of notice, will be apt to excite opposition, perhaps condemnation. But I have now been engaged for nearly two years in a laborious study of the evidences upon which the general belief in regard to hydrophobia rests, and I have been gradually led to certain convictions different from those with which I started, and which I feel it my duty to make public. One of these is that hydrophobia is not a specific, inoculable disease, derived from the bite of a similarly affected animal. Another is that if we wish to have an accurate, scientific knowledge of what too often actually takes place, and is usually called hydrophobia, we must begin the study of it unprejudiced by the views heretofore generally entertained in regard to it, and with canons of criticism very different from those heretofore deemed sufficient.

I know that these convictions are not novel, and that they have been stated and defended with arguments before. I know, too, that they have heretofore failed to secure the assent of the greatest men who in every generation have adorned the profession of medicine. None the less, however, do I believe them to be true, and that the time will come when they will not be—as they have been in the past—characterized as too absurd to be discussed, or decried as too dangerous to be tolerated.

But, however that may be, a sense of duty compels me to join myself to the small minority whom I think to be on the right side of the question, for truth's sake. Further, in this matter, the interests of science are in an urgent sense the interests of humanity. For this reason one who feels strongly must speak boldly. This, then, is

my apology to those who may think I have erred in opposing the opinion of so many men deservedly honored and respected in our profession.

THE ANNUAL REPORT OF THE LIBRARY COMMITTEE

showed that there have been added to the library this year 2186 volumes, 2107 pamphlets, and 2862 numbers of journals.

The total number of volumes now in the library is 26,359. For the ensuing year, the library will be kept open, except on Sundays and legal holidays, from ten o'clock A.M. to five P.M.

There are in the collection 3381 duplicates; and particular attention was called to this fact, inasmuch as it affords a rare opportunity to other libraries of augmenting their list at comparatively small expense.

THE REPORT OF THE COMMITTEE ON THE DIRECTORY FOR NURSES

showed that the number of nurses registered December 1, 1882, was . . . . 209

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| Added during the year . . . | 104 | |
| Lost by striking from roll . | 6 | |
| Lost by withdrawal . . . . | 4 | |
| | – | 10 |
| Net gain . . . . . | | 94 |
| Present number . . . . . | | 303 |

Total number of nurses furnished during the year, 733,—an average per month of 61, as against 49 for last year.

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| Largest number (February) . . . | 84 |
| Smallest number (August) . . . | 34 |
| Sent outside of the city, but within the State . . . . . | 63 |
| Sent to other States . . . . . | 59 |
| Wet-nurses furnished . . . . | 17 |
| Of registered nurses, there are males . | 39 |
| " " " " females . | 264 |
| Graduates of training-schools . . | 60 |
| Non-graduates . . . . . | 243 |

The amount given to the library during the last year was two hundred dollars, and for the present year three hundred dollars. Many physicians take great trouble and waste much valuable time in hunting up nurses personally; or, having obtained a good nurse through the Directory, they transfer her from one patient to another directly, instead of through the Directory. Were they to use the Directory, they would obtain the *same* nurses, and add to the income of the Directory, and so to the appropriation to the Library.

It is the desire of the committee to make the Directory also a bureau for all needed information for the sick; and they have in contemplation measures by which, if any one desires to obtain boarding in the country or at the sea-side for cases of whooping-cough, or for recent cases of measles, scarlet fever, or diphtheria, and for information concerning all appliances of the sick, such as invalid-chairs, wheel and other crutches, bed-rests, fracture-, water-, or air-beds, etc., he may obtain the object he seeks at the Directory.

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## PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, December 13, 1883.

DR. J. H. MUSSER in the chair.

*Specimen of enormous hypertrophy of the heart.* Presented by CHARLES W. DULLES, M.D.

THE patient from whom this specimen was obtained was a young man, 18 years of age, who came under my care in February, 1882, in an attack of muscular rheumatism, principally affecting the shoulders. I found at that time great oppression of breathing, a heart dilated and hypertrophied, with a harsh, strong mitral systolic and presystolic murmur.

Subsequently, albuminuria and general dropsy appeared, with effusion into the abdomen and thorax, and he died with œdema of the lungs.

The autopsy was made with the assistance of Dr. FORMAD and Dr. J. H. MUSSER. The points of interest were as follows. General œdema of feet and legs, the face and neck and chest covered with purpura-like spots and patches. The abdomen contained about two quarts of clear serum; each pleural cavity nearly as much. The lungs were normal, but small, and occupied the upper part of the chest. They were quite œdematous. The liver was slightly fatty. The spleen was of normal size, but very hard and tough. The kidneys were large, congenitally lobulated, and in a state of cyanotic hypertrophy.

The heart was enormously hypertrophied, weighing, when all the adherent parts were removed, forty-eight ounces. The pericardium was so uniformly attached to it that it could not be removed, and there was absolutely no pericardial cavity. The right ventricle contained about six ounces, the left side about two, of soft post-mortem clot. After the heart had been opened and washed, it weighed forty ounces. All the valves and blood-vessels were healthy. The tricuspid and aortic valves were quite competent. The mitral orifice was enormous, measuring two and a half inches across. Every part of the heart was hypertrophied, and all to about the same degree. The whole organ was about the size of that of a bullock.

The points of interest in this case—aside from the curiousness of the specimen—seem to be the comparative immunity of the kidneys, the absence of the physical signs of adherent pericardium during life, the benefit derived from the use of iodide of potash, the temporary disappearance of the very strong

mitral systolic and presystolic murmur, and the parotid swelling following the hypodermic injection of pilocarpine in the arm of the same side.

Dr. J. H. MUSSER, during life, had marked out on the chest the dimensions of the heart, and made it out as enormous, extending especially to the right. Furthermore, he thought that there was a double mitral murmur. The only apparent cause for the hypertrophy was the adherent pericardium. He would like to know what Dr. Henry thought of the correctness of this explanation.

Dr. F. P. HENRY said that the heart presented was remarkable not only for its enormous size, but also for the absence of the usual causes of cardiac hypertrophy, there being neither valvular disease nor obstruction in any part of the circulation. During his student days he had seen some very large hearts in the collection which Prof. Alonzo Clarke was accustomed to show to his class, but he would not trust his memory so far as to affirm that any one of them was as large as the one just shown.

Dr. MACCONNELL had seen a case in a member of the Modjeska troupe, where post-mortem examination showed an enormously hypertrophied heart with adherent pericardium, and markedly granular kidneys. In this case the hypertrophy was clearly due to the kidney-trouble.

Dr. FORMAD said that Dr. Robinson, of New York, had recently reported a case of hypertrophied heart weighing fifty-six ounces, but Dr. Dulles's specimen was weighed after removal of clots.

Dr. MUSSER asked whether other members of the patient's family had not hypertrophied hearts without valvular lesions. If such was the case, taking into consideration the age of the patient, it would be well to consider the probability of the hypertrophy being in part secondary to the pericardial adhesions, in part idiopathic in origin.

Dr. DULLES said that there was a tendency to hypertrophy of the heart in one sister, and that the murmur at times was double.

*Calcified pericardium—Double mitral disease.*

Ella S., white, æt. 23, was admitted to the University Hospital complaining of palpitation and dyspnœa, and suffering from an œdematous and eczematous condition of the lower extremities. She died three weeks after admission, in a fit of dyspnœa.

*Autopsy, seven hours after death.*—General dropsy, most marked in the lower extremities and genitals. On the lower part of the abdomen there is a marked varicose condition of the cutaneous lymphatics. The cavity of the pericardium was completely obliterated by adhesions. The two pericardial surfaces, and the fibrous tissue connecting them, had been changed into a calcareous plate three inches broad, completely encircling about its middle the heart, with the exception of a space one inch wide on the posterior surface of the left ventricle. This calcified condition extended for one inch on the anterior surface of the pulmonary artery. The heart, with the calcified pericardium, weighed twenty-eight ounces. The auricles were dilated, their walls thinned. The ventricles were dilated, their walls thickened and undergoing fatty degeneration. The leaflets of the mitral valve were thickened and rigid; the mitral orifice was very decidedly narrowed. In the inner surface of the left auricle were several calcareous patches. The aorta was very small, scarcely admitting the index finger, and showed patches of atheroma. The lungs were chronically congested and œdematous, the condition being most marked on the left. There was no breaking down of their substance. The abdomen contained five gallons of straw-colored serum. The peritoneum was thickened and roughened. The liver weighed three and one-half pounds, and was cirrhotic. Its capsule was much thickened, and adherent to surrounding structures. The mucous membrane of the stomach was mammillated and thickened. The kidneys showed cyanotic induration.

*Section of fibroma mammæ.* Presented by Dr. W. G. MACCONNELL for Prof. PANCOAST.

The patient was 22 years of age, and the growth was of seven months' duration. Fibromata of the breast are very frequently found, although some English authorities consider them to be of rare occurrence. They have been variously described under different names by writers. Birkett considers them a form of adenoma; Broca, adenoma with predominance of stroma, etc. This tumor was of an ovoid shape, firm and elastic, and on section presented a maroon-colored tissue, which, under the microscope, is seen to be composed of dense bundles of mature fibrous tissue, with but few nuclei. In some portions bands of wavy connective tissue are seen. The epithelial elements of the acini are hyperplastic.

*Section of large spindle-celled sarcoma of lower jaw.* Exhibited by Dr. W. G. MACCONNELL for Prof. PANCOAST.

The patient was a man, æt. 24 years. The growth had existed for about three years. The egg-shell crackle was readily elicited, the growth being of central origin. On section it presented a whitish appearance, and was traversed by spicula of bone.

*Liver of chicken with tubercular growths.* Exhibited by Dr. W. G. MACCONNELL.

The microscope clearly proved the nature of the growths.

Dr. FORMAD had seen four or five similar cases in the chicken, and two in the turkey,

in all of which he had detected tubercle-bacilli.

Dr. BARTON was much interested in two of the specimens presented by Dr. MacConnell. He was much surprised as to the nature of the tumor of the jaw, in that it was a spindle-celled and not a giant-celled sarcoma. Its site and duration would clinically have clearly indicated one of the myeloid variety. The sections of the mammary growth differed from those examined by him, in that in adeno-fibroma the glandular elements were more evenly distributed, whereas this section reminded him of his former studies of an elderly normal gland. Such large tracts are found without any traces of gland-tissue, whereas in all adeno-fibromas examined by him the adenomatous and fibrous elements were relatively more evenly distributed, giving the idea of the neogenesis of both, and not the atrophy of one and the proliferation of the other.

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## NEW YORK COUNTY MEDICAL SOCIETY.

A CALLED meeting was held December 21, 1883, S. O. VAN DER POEL, M.D., President, in the chair.

Dr. H. J. GARRIGUES read a paper on

### PREVENTION OF PUERPERAL INFECTION.

The author stated at the opening of his paper that he wished simply to lay before the profession the means by which he had succeeded in freeing the Maternity wards at the Charity Hospital of puerperal fever, leaving out of consideration all theorizing regarding the nature of puerperal fever. Brief allusion was made to the history of antiseptics in obstetrical practice. Dr. Garrigues himself has so far adopted Listerism in midwifery practice, during the past eight years, as to make it a habit to wash the hands and instruments in a carbolic-acid solution, to make vaginal injections twice daily during the first week after delivery, and to wash out the uterus when indicated either as a prophylactic or a curative measure. He carried this plan with him on becoming one of the physicians to the Maternity Hospital. While this hospital has a special board of physicians, it is not an entirely separate institution, but a part of the Charity general hospital; and everybody knows how great the mortality usually is among lying-in women in a general hospital. The following statistics for the Maternity Hospital were read:

| | Number of Deliveries. | Deaths. |
|---|---|---|
| 1875 . . . | 570 | 15 |
| 1876 . . . | 536 | 20 |
| 1877 . . . | 480 | 32 |
| 1878 . . . | 225 | 7 |
| 1879 . . . | 254 | 11 |
| 1880 . . . | 149 | 8 |
| 1881 . . . | 382 | 9 |
| 1882 . . . | 431 | 14 |

While some of the deaths were attributable to diseases for which the hospital was not responsible, yet the great majority were the effect of hospitalism. During the first nine months of the present year the number of deliveries had been three hundred and forty-five, with thirty deaths. During the first three months of this year, while the author was on duty, the number of deliveries was one hundred and eight, the mortality eleven. Before a recent date it was the exception rather than the rule to see a perfect lying-in period. During six months from October 1, 1882, to March 1, 1883, there were one hundred and ninety-two women delivered, forty-six of whom were seriously sick, thirty-nine with inflammatory puerperal disease. When the author went on duty, October 1 of the present year, the condition of the hospital was at its worst: nine women had died during the preceding month, and half a dozen sick were left over from the preceding service, one of them dying later. In the mean time, bichloride of mercury began to be praised in surgical and obstetrical practice, and he therefore made use of it in the Maternity Hospital. But, not trusting entirely to the virtue of a newly-introduced drug, he adopted several other measures, all of which may have contributed somewhat to the excellent results obtained. At the hospital there are two large wards and one smaller for patients, a delivery-room, a large ward and two tents for the sick. Certain improvements were made in the condition of the wards, and when empty they were thoroughly fumigated with sulphur fumes, the windows then left open day and night, the floors and furniture scrubbed with soap and water, and bichloride of mercury used. The bedclothes were changed. In all the wards large demijohns were placed, filled with bichloride solution (1 to 1000), for use in washing the hands, making injections, etc. It can be used hot or cold, according to indications. When the patient was brought to the delivery-room she was given an enema, and the genitals, the buttocks, and the thighs were washed carefully with a lukewarm solution of the bichloride (1 to 2000). At least two quarts were injected into the vagina by means of the fountain-syringe. The fountain syringe consisted of a glass bucket, a long rubber tube, a straight glass tube for vaginal injections, and a curved one for intra-uterine injections when needed. The tubes were perforated at the end, and there were a number of perforations on the stem near the extremity. In cases of tedious labor, the vaginal injection was repeated every three hours. The rubber sheet covering the delivery-bed was washed with the antiseptic solution just before delivery. In order to limit the danger of infection by examination as much as possible, none of the nurses were allowed to make examinations except the one in charge of the waiting-ward and the head nurse in

the pavilion; and these not to do so oftener than necessary to notify the doctor. The latter was requested not to introduce the finger into the womb, but to be satisfied with an abdominal examination and an examination of the os externum. His hands were to be washed in the bichloride solution, soap and nail-brush to be used. The hands were to be held in the solution a minute or more each time the genital organs were approached. If the hands or instruments were to be introduced into the womb, glycerin was used with the bichloride of mercury (1 to 2000). This was preferred to carbolized oil, as the glycerin itself contained antiseptic properties, which were enhanced by the addition of the bichloride. When the head appeared at the vulva, a piece of lint, soaked in the bichloride solution, was applied, and kept there, for the prevention of the entrance of contaminated air to the vagina. After the expulsion of the child, the genitals were kept covered with a similar compress. The placenta should be expressed, if possible avoiding the introduction of the hand into the vagina. If the hand were introduced, the vagina should afterwards be washed out with the antiseptic solution; otherwise not. On the same principle, intra-uterine injections were employed only when the hands or instruments were introduced, or on the birth of a macerated child. But he never allowed any of the membranes to remain in the womb. The introduction of the entire hand into that organ gives rise to very little danger compared with that of hemorrhage and septicæmia, which are liable to develop if part of the membranes be left behind. In such cases, the intra-uterine injection was given immediately after the removal of the secundines, from two to six quarts of a hot solution being employed. In case of symptoms pointing to possible affection of the uterus, a speculum was inserted, and a careful examination made of the vagina and cervix before proceeding with the uterine injection.

In a case of normal labor the patient was washed with the antiseptic solution. A piece of lint, six inches wide and eight long, folded lengthwise so as to be three inches wide, was placed over the vulva. Outside of that was placed a piece of oiled muslin nine inches long and four inches wide. Outside of that still, came a large pad of oakum; and finally the whole was fastened to a bandage in front and behind by a piece of muslin eighteen inches square and folded together so as to form a kind of boat, pinned in front and behind at each of its corners. This dressing was renewed four times in the twenty-fonr hours. At the same time the genitals were washed with the bichloride solution. The floor of the ward was sprinkled four times a day with the undiluted solution. In order to prevent infection through visitors, the patient was not allowed to see any person while in the pavilion, unless death were imminent, when a clergyman was admitted. The doctors and nurses in attendance were not allowed to go into the general wards or into the dead-house.

The instruments were kept in a five-percent. solution of carbolic acid, the bichloride being injurious to metal. The patients sometimes complained of a little smarting from the bichloride, and in one case it seemed to produce a slight eruption, which, however, was easily controlled by glycerin. In no case had there been any general symptoms attributable to the mercury. The dressings were continued as long as the patients were in the convalescent ward. They were usually discharged between the tenth and the fifteenth day.

The result of adopting this plan of treatment had been wonderful. As if by magic, all trouble had disappeared from the hospital. Ninety-seven women had been delivered since its introduction, and not only had none died, but there had scarcely been any sickness among them. There had been no trace of diphtheritic inflammation, by which they formerly had been persecuted. Where they used to have offensive odors, feverish and despairing patients, overworked nurses and doctors, the air is now pure, the patients look well, the temperature is normal, the nurses are cheerful, and the doctors happy.

The bichloride has certain advantages over carbolic acid: first, it is a much more reliable disinfectant; second, it is not only free from odor, but it is in addition an excellent deodorizer; third, it affects the skin less; fourth, it is more economical.

### DISCUSSION.

The paper being open for discussion, Dr. MURRAY said that he was extremely interested in the paper, as he was Dr. Garrigues's immediate predecessor in the service at the Maternity Hospital, and had witnessed the ravages of puerperal diseases among the patients there. During the three months preceding Dr. Garrigues's last term of service ninety-six women were delivered, fourteen of whom died, eight of puerperal disease. Puerperal fever, as it existed in this hospital, was not like that usually described in text-books: it was more like that which reigned in Bellevue Hospital some years ago. There was a good deal of puerperal diphtheria, usually commencing at the vulva and extending up the vagina, but seldom affecting the uterus. It was usually ushered in with mild symptoms, as a small and frequent pulse, without marked chill, and slight rise of temperature. After the first few days the temperature was liable to become intermittent, being in the morning perhaps 101° F. and in the afternoon 102.5° F. The vulva, being exposed, would show a slight blush, which gradually deepened, and in the course of from one to three days lacerations

# OLEATES.

These preparations are salts formed by the union of oleic acid with the respective bases indicated. They are designed for external application, and combine, apparently, all the well-known penetrative property of oleic acid. Their medicinal virtues are entirely dependent on their bases, which are quite readily introduced into the circulation when applied epidermically in this form. As a means of securing the constitutional effects of these bases, their application in the form of the Oleates offers many advantages, which will be readily appreciated, especially in the treatment of delicate and irritable of the economy.

Although the advantages to be derived from the combination of some salts with oleic acid were recognized as early as 1870, the use of these compounds has not become general, and principally, because of defects in the pharmaceutical preparation, the original crude method of their preparation not having been improved upon. Within the last year Dr. J. V. Shoemaker, of Philadelphia, has made the subject of the Oleates a matter of special study and experiment, both from a pharmaceutical and a clinical standpoint. The result has been the production of a number of very valuable compounds, which, we trust, will soon be more generally employed. We have received from Dr. Shoemaker full information regarding his methods, and are now prepared to furnish eleven of the following metals, which have been found of great value in the treatment indicated:

**ALUMINUM.**—A valuable astringent, and, in combination with morphine, a powerful anodyne.

**ANTIMONY.**—The preparation contains twenty (20) grains of oleate of antimony to the ounce, and is employed as a counter-irritant in the treatment of hyperæsthesia, etc.

**BISMUTH.**—An excellent emollient application.

**COPPER.**—For the treatment of ringworm, etc.

**IRON.**—Readily soluble in the fats and oils, and of great value in treating chlorosis.

**MERCURY.**—A powerful antiseptic, and of great value in treating syphilis.

**SILVER.**—An astringent and antiseptic, and of great value in treating chronic diseases of the urinary organs.

**ZINC.**—An excellent astringent and antiseptic, and of great value in treating chronic diseases of the urinary organs.

## OLEATES OF ALKALOIDS.

ONE DRY OF THESE COMPOUNDS.

Aconitine (2 per cent. of the alkaloid).
Atropine (2 per cent. of the alkaloid).
Morphine (2 per cent. of the alkaloid).
Morphine and Mercury (2 per cent. morphine and 10 per cent. mercury oxide).
Quinine (25 per cent. of the alkaloid).
Strychnine (2 per cent. of the alkaloid).
Veratrine (10 per cent. of the alkaloid).

## OINTMENTS OF OLEATES.

These contain the several metals mentioned above. They are made from [illegible] and carefully prepared, and for all the properties of ointments [illegible].

Physicians [illegible] of the above, will find them [illegible] the usage of the [illegible] as the ordinary, will be furnished gratis on application.

**PARKE, DAVIS & CO.**

DETROIT, MICH.

# BOUDAULT'S PEPSINE.

**The only Pepsine used in the Hospitals of Paris for the last 30 years.**

Unlike the various substitutes which, in some cases, are but unscientific or incompatible compounds, forced upon the Medical Profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be almost useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the Awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the Profession, and is therefore especially worthy of their attention.

With a view of bringing this important remedy within the reach of all, *its price has been materially reduced.* It is now not only the best, but comparatively the cheapest.

In answer to frequent calls, another preparation is now offered,

## BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

*Boudault's Pepsine* is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

*Boudault's Saccharated Pepsine* is sold in bottles of 1, 4, 8, and 16 ounces for dispensing.

Besides Boudault's Pepsine in powder, we offer also

## BOUDAULT'S WINE OF PEPSINE.

In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

# DR. RABUTEAU'S

(Laureate of the Institute of France)

## DRAGEES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir,* and *Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Comptes-Rendus.*

"The ferruginous preparations of *Dr. Rabuteau* do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hopitaux.*

*Dr. Rabuteau's Elixir* is prescribed when some difficulty is experienced in swallowing the Dragees; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

*Dr. Rabuteau's Syrup* is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragees will be sent free to any physician mentioning THE MEDICAL TIMES.

**Prepared by OLIN & CO., Pharmacists, Paris.** E. FOUGERA & CO., Agents for the United States.

# TANRET'S PELLETIERINE

**FOR THE TREATMENT OF TAPE-WORM (TENIA SOLIUM).**

This New Tæniafuge, the active alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Delardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is harmless, easy to administer, and, if certain preliminaries are observed, success will be insured. Pelletierine is prepared by

**M. CHAS. TANRET, Pharmacien de 1re Classe, 64, Rue Rome du Marché, Paris.**

# DUCRO'S ALIMENTARY ELIXIR,

A COMBINATION UNITING THE PROPERTIES OF

## ALCOHOLIC STIMULANTS AND RAW MEAT

This preparation, which has been used with great success in the hospitals of Paris since 1867, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Scrofula, Malarious Cachexia,* etc.

**Prepared by EMILE DUCRO & CO., Successors to DUCRO & CO., Paris.**

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would be found covered with a grayish membrane. Typhoid symptoms then developed. Different modes of treatment had been resorted to. Carbolic acid had been used extensively; he had used it almost to the extent, in some instances, of producing actual cauterization; yet as soon as the slight coating which it caused separated, the diphtheritic process seemed to develop even in greater severity. He thought that the mortality-rate at the Maternity Hospital had been greater from the fact that certain of the wards had formerly become thoroughly septicized before being used for confinement purposes.

Dr. W. GILL WYLIE said that about six months ago he read a paper before the Society, in which he advocated certain prophylactic antiseptic measures in cases of labor, and since the adoption of this method he had had but a single case in which there was a rise of temperature. It was a case for the use of forceps, and the temperature rose but slightly. He referred to a case which illustrated the necessity of free uterine drainage in puerperal fever, especially after abortion. If necessary, the drainage-tube should be introduced.

Dr. W. R. GILLETTE, who had been physician to the Maternity Hospital for about twelve years, thought that there could be no question in the minds of any present as to the importance of all the suggestions which had been mentioned by the author for the prevention of the development and spread of puerperal fever in the Maternity service. There might be some discussion, however, as to the methods to be employed, although he thought we need not dwell particularly upon these. The bichloride of mercury being the latest disinfectant, he supposed he would have to bow to it and accept it; but it was doubtful whether it ought entirely to supplant others which had stood the test of time. He himself, however, had not used the bichloride. With regard to the dressings employed, he could, perhaps, see benefit in the external dressing, but he could not understand how the compress of oakum and lint, the ordinary Lister dressing, could be of special benefit to the woman in the lying-in hospital, for she moved about in bed, and the dressing could not be kept in close apposition, preventing the entrance of germs from the air. Dr. Gillette referred to the death-rate among the parturients in Bellevue Hospital just before that service was transferred to the Maternity. It had been very great indeed, but so soon as the patients were transferred to the Island, at the Maternity Hospital, into perfectly clean wards, the mortality was reduced almost to a minimum. He believed that the secret of success in lying-in institutions lay in strict cleanliness.

Dr. A. S. HUNTER was quite in accord with the views expressed by the author regarding cleanliness and the use of antiseptics. He believed, with Dr. Gillette, that the external pad presented by Dr. Garrigues would not succeed in keeping out the germs contained in the atmosphere. He preferred Lyman's silver tube for making intra-uterine injections. He also preferred the Davidson syringe to the fountain syringe, as with it the water could be thrown in in jets. He believed that antiseptic methods could be carried out with ease, even in detail, in obstetrical practice. He used intra-uterine injections only when there was special indication therefor, as in septicæmia. A napkin wrung out of the antiseptic solution and placed over the genitals was sufficient.

Dr. SIMON BARUCH offered his unqualified condemnation of the practice of antiseptic injections after normal labor and for prophylactic purposes. Out of nine hundred cases of midwifery he had seen but one death preceded by febrile symptoms, but since commencing the use of antiseptic vaginal injections after labor he had seen quite a number. He quoted statistics by German authorities who had given the method a thorough trial, and they went to show that much better results were obtained by simple attention to cleanliness, without any disturbance of the patient by injections or otherwise. The danger of removing clots and opening up the mouths of vessels to absorb poisonous matter, of injecting the fluid directly into the sinuses, of injuring the lining membrane of the genital tract, of forcing the fluid into the peritoneal cavity, etc.,—these were all dangers attending injections, as had been shown by actual experience.

The paper was further discussed by Dr. F. V. WHITE, Dr. GERRISH, and Dr. J. C. PETERS, and the discussion was closed by the author.

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## NEW YORK PATHOLOGICAL SOCIETY.

A REGULAR meeting was held December 26, 1883, GEORGE F. SHRADY, M.D., President, in the chair.

### DILATATION OF THE STOMACH.

Dr. JOHN C. PETERS related a case of enormous distention of the stomach, occurring in a female, who had become much emaciated, and was in the habit, after retaining her food for two or three days, of throwing it up by the basinful. It was vomited in a fairly well digested condition. A small tumor could be felt, supposed to be located near the pyloric orifice, and believed to be the cause of obstruction to the farther passage of the food. The œsophageal tube was not introduced, the patient's low condition not permitting. She complained of great discomfort on being turned from side to side. He had seen a similar condition in two other cases, each of them females, and in each there being a tumor.

Dr. VAN GIESON recalled a case in which the stomach was so greatly distended that its outlines were recognized at the ensiform cartilage and symphysis pubis. Dr. Flint believed distention to be due to stricture of the intestine, but the autopsy showed no other cause than probable paralysis. The patient had become greatly emaciated.

Dr. R. W. AMIDON had seen three cases of supposed dilatation of the stomach, and he was unable to withdraw anything through the stomach-pump except some mucus. He also referred to a case which suggested the question whether floating kidney was usually attended by albuminuria.

Dr. G. L. PEABODY replied that he had examined something like three thousand kidneys at autopsy, and had not seen a single case in which he could say that there was truly a floating kidney. He was therefore inclined to think that some mistake had been made in the comparatively numerous examples of floating kidney so diagnosticated of late. At any rate, there is not a sufficiently large number of authenticated cases to enable us to draw any general conclusions as to the condition of the urine.

### ENDARTERITIS OBLITERANS IN EPITHELIOMA.

Dr. G. L. PEABODY presented a penis, together with a microscopical section, in a case which was specially interesting as being a good illustration of the condition called endarteritis obliterans. The patient was a man 71 years of age, who first noticed a pimple on the frænum, which went on to develop into ulcerative epithelioma, necessitating amputation of the organ. A microscopical section showed connective-tissue development in the intima of the blood-vessels, as seen in cases of endarteritis obliterans in the brain. Dr. Peabody had seen the condition as frequently in non-syphilitic as in syphilitic subjects, and in different parts of the body, occurring in chronic phthisis and chronic nephritis, as well as in epithelioma.

### MILIARY ABSCESSES OF THE KIDNEYS.

Dr. BEVERLY ROBINSON presented a specimen, obtained from a woman, a domestic, who died in the Charity Hospital. She was admitted August 31, 1883, in a condition of emaciation, and of pregnancy at about the third month. She had incontinence of urine, accompanied by pain on its passage. Sweating and chills developed, with vomiting; the urine contained pus. Abortion took place at the fifth month. A few hours later she died of exhaustion. At the autopsy the lungs were found to be œdematous, with some adhesions at the posterior aspect of the apex of the right lung. The heart was normal. The liver weighed seven pounds, and contained fatty deposits. The kidneys weighed nine ounces each, and their surfaces were studded with miliary abscesses. The bladder was normal. No tubercular deposits were to be found, nor were there metastatic abscesses elsewhere.

Dr. PEABODY doubted whether it could be said with certainty, with the symptoms given, that there had not been some septic influence, nor that the apparent abscesses were not tubercular.

Dr. ROBINSON also showed a specimen in which a communication existed between the pleura and the lungs, constituting a kind of valve, which would illustrate the possibility of the existence of such an opening without there being at the same time an interchange of fluids.

### PYELONEPHRITIS AND ITS EFFECT UPON SURGICAL PROCEDURES.

Dr. JOHN A. WYETH presented specimens removed from a man who died in the hospital with cystitis and signs of hectic. He was 26 years of age, and had some time before been operated on for hemorrhoids, and cured. But three months later he returned, with frequent desire to pass urine, and later he developed high temperature. At the autopsy the kidneys were found the seat of pyelonephritis, constituting very fine examples of that condition. The ureters were distended. The bladder was greatly thickened from chronic cystitis. The latter condition had so overshadowed the kidney-symptoms that recently an operation had been attempted for drainage of the bladder. When operating for hemorrhoids, some time before, ether was administered, and the patient came near dying under its influence. On the occasion of doing cystotomy chloroform was administered, and scarcely had the external incision been made when the heart stopped, respiration ceased, and it was with some difficulty that the patient was made to rally. The operation was not completed. Dr. Wyeth prefers the lateral operation to the median. Sir Henry Thompson had spoken favorably of cystotomy in the treatment of chronic cystitis.

Dr. GERRISH said he had done the operation in one case with benefit.

Dr. PEABODY thought that an important question arose in these cases, important because difficult to answer,—viz., the possibility of excluding disease of the kidneys, or pyelonephritis.

The PRESIDENT thought that in such cases, in which there was pyelonephritis and consequent danger in administering an anæsthetic, cystotomy should not be performed.

Dr. WYETH thought the patients should have the benefit of cystotomy, notwithstanding the presence of pyelonephritis, and, if the operation were attended by some risk, that risk had better be assumed than allow the patient to suffer without any attempt at relief.

## GLEANINGS FROM EXCHANGES.

THE ABUSE OF ALCOHOLIC LIQUORS.—Dr. James E. Reeves, Secretary of the West Virginia State Board of Health, makes the following well-timed protest against the constant use of alcoholic beverages, in an address before the Public Health Association, on the "Eminent Domain of Sanitary Science, etc.":

"The popularity of the milder alcoholic beverages—ale, beer, and wine—is directly due to the influence of our adopted fellow-citizens in all classes of society. I should be untrue to myself, to my position, to the medical profession, and to humanity, if I let this opportunity pass without sounding a note of warning against the intemperate use of alcoholic drinks, and to speak of their influence to debase the citizen and his progeny—physically, morally, and mentally—and deny him and them good health and longevity.

"The connection between drunkenness and crime, and between drunkenness and poverty, is close, and unvarying in its effect upon society. The remarkable increase of insanity in recent years may, in part, be traced to the prevalence of the intemperate use of intoxicating liquors. That wine, beer, and the stronger beverages, when taken in excess, all tend to derange the mental manifestations, is a fact too familiar to medical men to require of me argument to prove its truth. They act upon and disorder the brain more directly, perhaps, than any other organ, and, by habitual excess, may at last induce permanent impairment of the mental faculties.

"In times of epidemic visitation—when pestilence is sweeping the country—the intemperate and the drunkard are the first to fall by its arrows of death; and the chances of recovery from any disease or injury whatever are infinitely less for the drunkard than for the sober man. Were man to live as he should do,—*enjoying* every good gift and *abusing none*,—he would (saving accidents) live to extreme old age without disease. But, alas! how many such careful, prudent, temperate lives could there to-day be found in this great country of ours, where a kind Providence has made it possible for us to enjoy every blessing the whole world can afford? The denunciation by the prophet Isaiah—"*Woe to the drunkards*"—"*Woe to them that are mighty to drink wine*"—is not only in course of fulfilment every day with the drunkard, but the *curse* extends to his children yet unborn, even to the third and fourth generation, by inheritance of appetites which are far more constant and certain in their descent than patrimony.

"It has been asserted that at least seven-tenths of all the crimes and poverty and calamity to the people of the United States spring from the abuse of personal liberty in the use of spirituous, vinous, and malt liquors; and if the charge be true—either in whole or in part—it is a subject which should concern sanitarians. Vice needs every possible exposure and discouragement to prevent its seeds from growth, and the lesson should everywhere be taught, that good health and long life cannot dwell in association with a poisoned mind or an upbraiding conscience."

CHLORATE-OF-POTASH POISONING.—Drs. Broesicke and Schadewald report a case (*Berliner Klinische Wochenschrift*, No. 42, 1883) of rapid poisoning by chlorate of potash in a healthy young man, aged 22. After excessive and incautious gargling with a strong solution for some trifling-throat affection, in the course of which he had swallowed a considerable quantity, the patient complained on the following day of sickness and of pain in the sides and loins. Signs of acute gastritis rapidly followed; nausea and severe pain in the splenic region were the chief symptoms. Some enlargement of the spleen could be detected. Heart and lungs were normal; but distinct cyanosis, especially of lips and extremities, was present. Two days after the poisoning severe vomiting set in, and lasted to the end. Icterus followed, but disappeared before death. On the fourth day, severe epistaxis occurred; extreme præcordial anxiety followed, but without any notable signs in heart or lungs; and some rigidity of the muscles of the extremities was observed. Death took place on the eighth day. Throughout the whole period of illness hardly any urine was passed; the temperature remained a little below the normal; the pulse, however, was of fair strength. The post-mortem examination, made four days after death, revealed a brown discoloration of the blood in the vessels. The blood, however, gave the normal appearance to the spectroscope. The spleen was very greatly enlarged, brownish in places, the capsule soft. The kidneys were also enlarged, the cortical portions expanded and of a dirty-green color. Microscopically, the straight and convoluted tubules were found filled with numerous brownish, irregular-shaped masses of hæmoglobin. The stomach showed acute and chronic catarrh, with a few ecchymoses. The large intestine and rectum contained a large quantity of brownish, watery fluid, and the mucous membrane appeared œdematous. Other organs normal.—*Medical Times and Gazette.*

DEATH FROM HEART-CLOT IN A FATTY HEART AFTER ETHERIZATION.—An interesting case is reported by Prof. Minot, of a single lady, 45 years of age, who had a right-sided pleural effusion, for which ether was successfully administered on October 15, and nearly two quarts of bloody serum were withdrawn. The chest having refilled, ether was again administered November 16, preparatory to a second paracentesis. The pa-

tient took the ether well, but when about a pint of the effusion had been withdrawn she became livid, and her breathing irregular and gasping. She was revived with difficulty, and two hours later she seemed quite recovered; subsequently the dyspnœa and lividity returned, and the patient died, asphyxiated, eight hours after the beginning of the etherization. An examination of the body showed a fatty heart, with a white clot extending from the right auricle into the pulmonary artery. She also had cancerous pleuritis and peritonitis.—*Boston Medical and Surgical Journal*, December 13.

## MISCELLANY.

HYDROPHOBIA.—The Brown "Animal Sanitary Institution" (under the government of the University of London) has issued a notice, in which it is said that hydrophobia occurs in dogs of all ages, and may appear at any season of the year. It is recognized by a change of demeanor of the dog, which becomes dejected, morose, inclined to roam, and anxious to hide itself. The animal gnaws at wood, stones, and any refuse which it sees, snaps at imaginary objects, and becomes unusually excited by strange or sudden noises. It rubs its throat with its paws, as if striving to get rid of some object lodged there; at the same time there is a more or less abundant flow of saliva from the mouth. The dog will attack its master, or animals of any kind; but it is most easily roused to fury by the presence of other dogs. There is throughout the disease no dread of water. In one form of the disease, called "dumb madness," there is paralysis of the jaw, and therefore inability to bite. If a dog has shown any of the symptoms of madness, it should be at once loose-muzzled and securely chained up. Owners of dogs are warned of the danger they may incur by allowing their face and hands (especially if scratched) to be licked by the animals, even if these show no sign of madness. All dog-bites should be immediately cleansed by suction and washing, and the wounds should be cauterized as soon as possible.—*St. Louis Druggist.*

## NOTES AND QUERIES.

### MEMORIAL NOTICE OF DR. T. S. KIRKBRIDE.

The notice published in our last issue should be corrected in so far as it states that Dr. Kirkbride moved with his family into the new hospital building when it was opened. This, we are informed, was not the case; but he continued to occupy the mansion on the grounds for the Department for Females, in which he lived from 1841 up to his death. The Department for Males is in the new building; the old one is still devoted to the uses of the Department for Females. The following tribute to the memory of Dr. Kirkbride, which appeared in the Philadelphia *Evening Bulletin*, is worthy of preservation:

IN MEMORIAM.

T. S. K.

*Died December 16th*, 1883.

O rare and radiant life, whose mission here,
Like some strong angel's winged with love divine,
Waited on human woe, to heal and cheer,
What high, unselfish, tireless zeal was thine;
To fan, with tender care, the flickering spark
Of waning reason and the shattered will,
To find the missing clue, where all is dark,
And guide to hope and light with patient skill;
True pity thine which clasped each clouded heart,
Nor on the lowliest ever looked askant.
Swaying distempered minds with sovereign art,
Gentle as woman, firm as adamant;
Nor less shall memory keep the tranquil grace
Of look and tone and bearing, staid and calm,
The sweet serenity of form and face,
Home's dearest solace, friendship's kindliest balm.
By this new grave no broken shaft we rear:
Thy finished work has followed thee above,
One step from duty, midst the shadows here,
To the full sunshine of eternal love!

W. A. B.

CHRISTMAS, 1883.

### RESOLUTIONS ON THE DEATH OF DR. WILLIAM H. HOOPER.

At a meeting of the Executive Committee of the Wood Medical Journal Club, held December 21, 1883, it was

"*Resolved*, That in the death of Dr. William H. Hooper this Club, in common with the medical profession of the city of Philadelphia, has lost a member conspicuous alike for the breadth of his culture, the soundness of his judgment, and the urbanity of his manner.

"*Resolved*, That we recognize in his acknowledged success as a practitioner the merited reward of long years of patient study, preliminary to, as well as during, his special preparation for professional life.

"*Resolved*, That a copy of these resolutions be sent to the family of the deceased, and to the *Philadelphia Medical Times*, *Medical Bulletin*, and *Medical and Surgical Reporter*."

(Signed) W. R. D. BLACKWOOD, *Secretary.*
BENJAMIN LEE, *Chairman.*

For the Committee.

## OFFICIAL LIST

*OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 22, 1883, TO JANUARY 5, 1884.*

APPEL, DANIEL M., CAPTAIN AND ASSISTANT-SURGEON.—Having relinquished the unexpired term of leave of absence granted by S. O. 68, Headquarters Division of the Atlantic, November 16, 1883, and reported for assignment, assigned to duty at Fort Porter, New York. Paragraph 2, S. O. 247, Department of the East, December 29, 1883.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty in charge of office of Medical Director Department of Texas, during the temporary absence of that officer. Paragraph 2, S. O. 164, Department of Texas, December 31, 1883.

*LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM DECEMBER 29, 1883, TO JANUARY 5, 1884.*

Medical Director A. L. GIHON to the Naval Hospital, Washington, D.C.

P. A. Surgeon CHARLES W. RUSH, U.S. steam-ship "Colorado," granted sick leave for three months.

Medical Inspector A. HUDSON from duty as Assistant to the Bureau of Medicine and Surgery, on the 18th inst., to the U.S. steam-ship "Lancaster," as the relief of Medical Inspector F. L. Bates, who is to be detached and ordered home.

P. A. Surgeon A. C. H. RUSSELL from the Navy-Yard, Washington, to hold himself in readiness for sea-service.